



**BRITANNIA GOLD AND COPPER MINING COMPANY.**—At the SEVENTH QUARTERLY GENERAL MEETING of shareholders, held at the offices, 5, Barge-yard Chambers, Bucklersbury, on Wednesday, the 22d of March, JOSEPH CARY, Esq., in the chair.

It was unanimously resolved:—

That the reports and minutes of the last meeting now ready be received and adopted.

That the financial statement and abstract of accounts now on the table be approved, and a copy thereof be transmitted to each shareholder, with a report of this meeting.

That a call of 2s. per share be made on the 20,000 shares of this company, payable in 14 days from the 25th inst.

That the resignation of the Rev. Josiah Bartlett as a member of the committee of management be accepted.

That the resignation of Mr. R. J. Biddle as secretary and purser be accepted, and that he be elected a member of the committee of management.

That Mr. P. F. Nursey be appointed secretary and purser for the next three months.

That the resignation of Mr. Scarth as agent at the mine be accepted.

That the committee be empowered to enter into an agreement for the erection of one of Mr. Perkes' machines at the mine, on the principle detailed in the draft agreement read by the chairman.

That the following gentlemen form the committee of management for the next three months:—Joseph Cary, Esq. (chairman), Maurice Evans, Esq., Charles Clark, Esq., Shirley Wooller, Esq., J. C. Ruding, Esq., Capt. Parry, Capt. Charette, Capt. Blasie.

That the cordial thanks of the shareholders be presented to Mr. Cary for the able manner in which he has presided over the business of this meeting, and to the committee generally for the zeal with which they have watched over the interests of the company.

PERRY F. NURSEY, Sec. and Purser.

5 Barge-yard Chambers, Bucklersbury, March 22, 1854.

**BRITANNIA GOLD AND COPPER MINING COMPANY.**—**B** NOTICE OF CALL.—At the Seventh Quarterly General Meeting of the shareholders, held on Wednesday, the 22d of March, 1854, a CALL OF TWO SHILLINGS per share was made. The holders of certificates are, therefore, requested to PAY to the purser, at the company's offices, 5, Barge-yard Chambers, Bucklersbury, London, the amount of such call on or before Saturday, the 8th of April next, and to bring their certificates to be marked as having had the call paid thereon.

By order, PERRY F. NURSEY, Sec. and Purser.

Dated this 23d day of March, 1854, 5, Barge-yard Chambers, Bucklersbury, London.

**WHEAL FORTUNE (SOUTH TAWTON) MINING COMPANY.**—**W**—At the BI-MONTHLY MEETING of the shareholders of this company, held at the offices of the company, 1, Cushion-court, Old Broad-street, on Saturday, the 18th of March, 1854,

OSMUND LEWIS, Esq., in the chair.

The notice calling the meeting having been read, the minutes of the last meeting were confirmed.

The following statement of accounts was then read:—

General Cash Account, March 18, 1854.

Dr.—Balance brought forward £10 17 8  
Cash for 105 shares 105 0 0  
Calls, at 2s. 6d. per share 363 15 0  
Calls, at 2s. 6d. per share 21 17 6  
Calls, at 1s. per share 73 0 0  
Cash due to Mr. Rice 10 8 10 = £584 19 0

Cr.—Cash, mine costs £15 5 11

Sundry merchants' bills 269 12 8

Office-rent and sundry expenses 18 17 8

Capt. Verran's various reports and expenses to the mine 21 0 0

Advertising and printing 20 13 3

Berdan's experiment of gaseous 1s 6 6

Johnson and Co.'s general analysis of ditto 3 3 0 = 7 9 6

Mr. Bunn's expenses to and from the mine, obtain 10 0 0 = £584 19 0

am grant of additional seat

The present liabilities of the mine amounted to about £150, and the assets, consisting of the arrears of the last call, &c., to £177.

The following resolutions were unanimously agreed to:—

That a special general meeting of the shareholders be held on Thursday, the 30th of March inst., at One o'clock precisely, for the purpose of taking into consideration the present affairs, and to determine the future course to be adopted by the company.

That a copy of the accounts as read be sent to every shareholder previous to any future bi-monthly meeting.

That the present committee of management be authorised to act until Thursday, the 30th inst.

That the thanks of the meeting be, and are hereby, tendered to the chairman, for his continuous attention to the affairs of the mine, and for presiding this day.

OSMUND LEWIS, Chairman.

1, Cushion-court, Old Broad-street, March 18, 1854.

**WHEAL FORTUNE (SOUTH TAWTON) MINING COMPANY.**—**W**—Notice is hereby given, that a SPECIAL GENERAL MEETING of the shareholders of this company will be HELD at the offices of the company, 1, Cushion-court, Old Broad-street, on Thursday, the 30th of March inst., at One o'clock precisely, for the purpose of taking into consideration the present affairs, and to determine the future course to be adopted by the company.

By order, OSMUND LEWIS, Chairman.

1, Cushion-court, Old Broad-street, March 18, 1854.

**BANDON BARTIES AND COPPER MINING COMPANY.**—**B** COUNTY OF CORK, IRELAND.

Capital £21,000, in shares of £1 each, paid up.

BROKERS—Messrs. Crooley Brothers, 30, Cornhill.

MANAGERS—Wm. Goodchap, Esq., Walbrook-house, Walbrook.

NO FURTHER APPLICATIONS FOR SHARES in this company will be RECEIVED from applicants in England, after Wednesday next, the 29th inst., nor from Ireland after Saturday, the 1st April.

By order, WM. GOODCHAP, Manager.

**GALLO-Y-FFRITH-RHEDYN LEAD MINING COMPANY.**—**G** Is formed for the purpose of working the celebrated Old Ffrith-Rhedyn Mines, situated about three miles from Llanrwst, in the county of Denbighshire, North Wales.

In 12,000 paid-up shares of £3 each.—No further liability to be incurred.

The shares to be issued in certificate to bearer of five shares each; no deed of sign, nor need any person purchasing shares sign the Cost-book until the first dividend meeting.

BANKERS—The London and County Banking Company, Lombard-street.

MANAGER AT THE MINE—Capt. George Davey.

The lease of this company's property, dated 1st March, for 21 years, has been granted to trustees. Parties who have subscribed, or are desirous of subscribing, for shares are hereby requested to pay their respective amounts to the bankers of the company, whose receipts they can exchange for scrip certificates to bearer, on presentation at the company's offices, 9, Austinfriars, where prospectuses may be had, and samples of the ore seen.—March 10, 1854.

H. HUNTER, Sec.

**TREBURGET CONSOLS MINING COMPANY.**—**T** 25,000 shares of £1 each.

NOTICE.—The shareholders and public are hereby informed, that henceforth the ONLY LEGITIMATE SCRIP CERTIFICATES OF SHARES in this company are those ISSUED AT ONE POUND each, and bearing the penny stamp, being signed by two members of the Committee of Management, and countersigned by the secretary.

Offices, 9, Austinfriars, Dec., 1854.

By order, J. HUNTER, Sec.

**OLA SILVER-LEAD AND COPPER MINING COMPANY.**—**O** COUNTY OF LIMERICK.

Capital, £12,000, in 12,000 parts or shares of £1 each.—Held under lease for 40 years, at 1-16th royalty.—To be conducted on the "COST-BOOK PRINCIPLE."

TRUSTEE.

JAMES BARING, Esq., London.

THOMAS CHANDLER, Esq., ship owner, London.

COMMITTEE OF MANAGEMENT.

(To be chosen from the shareholders at the first general meeting.)

BANKERS—Messrs. Souter, Atwood, and Co., London; the Provincial Bank of Ireland, Dublin, Limerick, Clonmel, &c.

ENGINEER—Mr. Richard Glanville, Bermondsey-wall, London.

BROKERS—J. T. Berkeley, Esq., Gresham Chambers, London; Messrs. Smyth and Du Bedat, College-green, Dublin.

SECRETARY—Francis Stokes, Esq.

OFFICES—CANNON HOUSE, QUEEN-STREET, CANNON-STREET, LONDON.

This property is situated in the County of Limerick, adjoining the railroad, a quarter of a mile from the Ola Railway Station, fifteen miles from Limerick, and four miles from the junction of the Dublin and Cork, and Waterford and Limerick Railways, and is one of those valuable sets which was abandoned in the famine year, 1847, for want of capital.

A shaft has been sunk upwards of 12 fms., east of which a level has been driven a considerable distance, on a beautiful lode 12 ft. wide; on the south or foot wall is a rich branch of silver-lead ore, 6 in. wide, which yields, upon being assayed, 24% fine silver per ton, and 32% per cent. of lead; and the remainder of the lode is a mass of manganic, thickly impregnated with copper. An extensive copper lode runs parallel to the north of the lead lode. There is a good supply of water for dressing, &c. The shares will be in certificate to bearer. Samples of ore from the property can be seen at the offices of the company, together with Mr. Mitchell's certificate of assay.

It is impossible, within the limits of an advertisement, to impart anything like a correct idea of the position and prospects of the mine, but an approximation thereto can be obtained by perusing the prospectus and reports, which may be had at the secretary, brokers, and also at the various branches of the Provincial Bank of Ireland, to whom applications for shares are to be made in the usual form.

**OLA SILVER-LEAD AND COPPER MINES, COUNTY OF LIMERICK.**—**O**—NO FURTHER APPLICATIONS FOR SHARES in the above company will be RECEIVED after Friday, the 31st inst.

Offices, Cannon House, Cannon-street, London, March 23, 1854.

**MINING.**—Much MINING WEALTH remains UNEXPLORED.

This object is now accomplished for a SMALL OUTLAY, without delay, by the HIRE of MEDWIN AND HALL'S PATENT PORTABLE STEAM-ENGINES, for pumping, winding, &c. These engines may be rented for any time required, of 10, 14, 20, or 30-horse power, and upwards; are strong, simple, mounted on broad wagon-wheels, horse-shafts to remove at pleasure, may be set to work without delay of fixing brick-work, chimney, &c. Several are ready for delivery, either at rental or purchase.—Apply to Messrs. Medwin and Hall, engineers, 92, Blackfriars-road. Some of the above engines are already employed in mining purposes.

**PATENT PORTABLE PUMPING STEAM ENGINES, FOR MINING, COLLIERY DRAINAGE, and other purposes.**—Messrs. MEDWIN AND HALL, ENGINEERS AND PORTABLE STEAM-ENGINE MAKERS, No. 92, BLACKFRIARS-ROAD, are PREPARED TO SUPPLY ON HIRE, at a rental for any required period, PATENT PORTABLE STEAM-ENGINES, from 8-horse power to 30-horse power and upwards, adapted for pumping, winding, or any other purposes. Several are now in satisfactory operation, certificates of which may be seen; also a 20-horse power will be at work on Monday, Tuesday, and Wednesday next, between the hours of Twelve and Four o'clock, at Messrs. Medwin and Hall's, engineers and portable steam-engine makers, 92, Blackfriars-road, London.

**M. LEE STEVENS'S PATENT FURNACES.**—**M**—THE PATENTED INVENTIONS of MR. JOHN LEE STEVENS, for the PREVENTION OF SMOKE and SAVING OF FUEL, are adapted to new and old furnaces of all kinds by the following engineering firms:—

BATH ..... STOKELEY, RAYNO, and PITT, Newark Foundry.  
CHEPSTOW ..... EDWARD FINCH, Bridge Works.  
CORNWALL ..... WILLIAM WEST and Sons, St. Blazey.  
HULL ..... MARTIN SAMUELSON and Co., Scott-street Foundry.  
LEEDS ..... ROBERT WOOD and Son, Larchfield Foundry.  
LIVERPOOL ..... W. JOHNSON and Co., Nailor-street.  
LONDON ..... J. TAYLOR and Co., Britannia Works, Birkenhead.  
MANCHESTER ..... SAML. HODGE and Sons, Onk-lane, Limehouse.  
NORTHAMPTON ..... JOHN MILLS, Osborn-street, Whitechapel.  
PEEL, WILLIAMS, and PEEL, Soho Ironworks.  
WENTWORTH ..... JOHN STEEKS, Westworth Foundry.

Information respecting further appointments, copies of reports and testimonials relative to the SUBVERSION OF SMOKE and SAVING OF FUEL EFFECTED in all varieties of furnaces, and further particulars, may be obtained from MR. JOHN LEE STEVENS, 1, FISH STREET HILL, LONDON.

**S MOKE PREVENTION TESTIMONIALS.**—**13, Mark-lane, March 22, 1854.**

SIR.—Having had your PATENT SMOKELESS FURNACE applied to my boiler, I have much pleasure in informing you that it answers the purpose intended. I may add, that for some years past I have consulted Mr. R. ARMSTRONG, engineer, on the subject of applying a smoke-consuming furnace to my boiler; but from its peculiar size and formation, he was unable to recommend any plan for the purpose, until your invention came before the public, and to which he drew my attention.

Mr. John Lee Stevens.

RICHARD BARRETT, Jun.

**ROUET TISSERY, Bermondsey, March 14, 1854.**

SIR.—We are happy to bear evidence of the efficiency of the PATENT SMOKELESS FURNACE, applied to one of our steam-boilers, particularly as it effects a saving of 1 cwt. coal per hour; and we hope there will be no delay in the application of your invention to the additional boiler making for us by Messrs. Saml. Hodge and Sons. And we are, Sir, your's truly,

BEVINGTON AND MORRIS.

Mr. Lee Stevens.

135, Houndsditch, and 4, Skinner's-place, Leadenhall Market, March 15, 1854.

DEAR SIR.—I am much pleased with the action of your PATENT SMOKELESS FURNACE, put in my oven by Mr. Kemp, both as regards cleanliness and economy; am perfectly satisfied it will repay the outlay in 12 months; and shall send an invention immediately adapted to my other ovens. Wishing you every success, I am, &c.,

EDWARD BURNELL.

Copies of Report to the GENERAL BOARD OF HEALTH through Dr. GAVIN MILROY, made by Mr. J. J. Stevens, Assoc. I.C.E., of the Darlington Works, Southwark, after inspection of the Patent Smokeless Furnaces on the premises of Mr. J. C. Preller, patent leather manufacturer; Messrs. Easton and Amos, engineers; Mr. Stevenson, engineer; Messrs. Keens and Welch, mustard manufacturers; Messrs. Miller, Ravenhill, and Salkeld, engineers, &c., may be obtained of the patentee; and copies of reports of Mr. Alexander Gordon, civil and marine engineer, and of Mr. Robt. Armstrong, C.E., author of the *Rudimentary Treatise on Steam Boilers*, &c., and of testimonial from about 40 London and provincial firms of eminence, to which new proofs in favour of the invention are added daily.

This system continues to be SUCCESSFULLY and ECONOMICALLY ADAPTED TO LAND AND MARINE BOILERS, COPPERS, PANS, STILLS, BAKERS' OVENS, &c. Information respecting LICENSES to MANUFACTURE or USE the PATENT SMOKELESS FURNACE is also given by Mr. JOHN LEE STEVENS, the patentee, at the offices, 1, Fish-street Hill, City, London, where references may be obtained to firms in London and elsewhere, on whose premises the invention is in daily operation.

**ANTI-FRICTION SCREW-PROPELLER, AND MARINE CAR-**

RIAGE COMPANY. Completely Registered.

CHAIRMAN—Rear-Admiral Sir JOHN ROSS, C.B.

H. TEMPEST GRAHAM, Esq.

D. T. JOHNSON, Esq.

W. YATES, Jun., Esq.

BANKERS—London and County Joint-Stock Bank.

BROKER—F. Helps, Esq.

By order.

GEORGE GRAHAM, Sec.

**THE SWANSEA COAL AND IRON COMPANY.**—**Conducted on the "COST-BOOK PRINCIPLE."**

Capital £100,000, in 100,000 shares, of £1 each, to be paid on delivery of the scrip.

This company may be regarded as the Coal Consumers' Association, and is instituted to supply its shareholders with good coal from their own collieries, the surplus to be disposed of to the public. Every subscriber for three shares and upwards will be entitled to receive 1 ton of coal per share at cost price, in proportion to the number held; in addition to which, the profits arising from the manufacture of iron, and the sale of fire clay and fire bricks, from a new and valuable patent, will form another source of revenue to the company.—There is no Deed to Sign.

BOARD OF MANAGEMENT.

The Right Hon. Lord MUSKERRY, Carlton Club.

COL. CHATTERTON, K.H., Chairman Cork and Bandon Railway Company.

Capt. C. J. FRANKLIN NEWTON, Esq., St. John's-Terrace, Regent's-park, and Thorne, Kent.

M. BAKER, Esq., Gracechurch-street, and Commercial-road, Limehouse.

JEFFERY DAVID DENNIS, Esq., 35, Leadenhall-street.

LOUIS DE VERA, Esq., Dunstable Lodge, Richmond.

THOMAS STRATFORD, Esq., Leigh-ton Buzzard, Bedfordshire.

OFFICES, 40, GRACECHURCH STREET.

London has already paid this year for want of these works would have gone far to have constructed them.

In addition, this in calculable advantage arises—such works constructed, the Tyne could become a harbour of refuge for ships caught in gales on the north-east coast, and they been in existence in the south-south-east gales in Jan., they would have saved 100 vessels, wrecked within 10 nautical miles of the Tyne, 50 of them at its mouth, which were worth nearly 300,000£., and the lives of numerous British seamen then lost. There is no place of shelter to leeward for 200 miles along that dangerous coast, and there are four harbours of refuge constructing, and costing already 1,300,000£. of public money. The tonnage of the three rivers of the north-east coast—the Tyne, Wear, and Tees—amounts alone to seven and a half millions of tons; while that of the south, from Dover to Plymouth inclusive, with all the southern tonnage of the Thames, is nearly about five and a half millions.

The consequent results are, the Admiralty wreck chart of last year demonstrates 9 wrecks in that distance upon the north-east coast, and only 116 wrecks, not half the number, on the south coast, which is having so many national harbours constructed for the protection of shipping; the north-east coast, with its larger amount of tonnage and its greater destruction, being left in the meantime entirely without protection or assistance.

The Tyne local authorities are prepared to pay half the cost of the constructions to give the Tyne a perpetual open entrance, so important, as we have seen, in the war, the economic purposes of London, and for protection in the storm—but the means are limited. The purposes to be effected are national, and it becomes a national work. The Legislature and Government, therefore, cannot but assist it by national means, in the same liberal manner as they have those on the south coast, with less necessity.

As one of a deputation from the Commissioners and Corporations of the Tyne to urge things on the Government, which has been done, I beg permission that, as can, to call your attention to the subject.

JAMES MATHER.

London, March 18.

## NEW METAL—ALUMINIUM FROM CLAY.

SIR.—The result of the experiments lately made in France by M. Deville, to obtain metal from argillaceous earth, has been highly successful. It is true that M. Wöhler discovered the metal aluminiun in his researches in 1828 and 1846, but the metal now introduced to the world by M. Deville, is stated to be as white as silver, malleable, and brittle. In tenacity it approaches iron. The melting point differs little from silver; its density is only 2.56, or about that of glass and flint; it does not sensibly oxidise when melted and cooled in the air; it is a good conductor of heat; it is unalterable in dry or humid air; it is insensible to the action of sulphuretted hydrogen, or to hot or cold water, or weak or concentrated nitric acid, or weak sulphuric acid. Muriatic acid appears to be its true solvent. M. Deville has announced the results of his further experiments, in order that the metal may be obtained in sufficient quantity to be available in the arts and manufactures. The discovery of an easy mode of procuring this noble metal from clay, which is so abundant in the world, would open the way to fame and fortune for the discoverer. The following simple experiment has been made by M. Chappelle, who, as soon as he heard of M. Deville's discovery of the pure metal aluminium, made the following trial:—He introduced pulverised clay, with marine salt and powdered charcoal, into a common crucible, and heated it in a reverberatory furnace by means of coke, but he did not succeed in obtaining a white heat. After cooling, the crucible was broken, and in the mass a considerable quantity of small globules (about half a millimetre in diameter, or about 1.50th of an inch), were found, of the colour of silver. He did not ascertain if these globules were quite pure; he, however, states that they were insoluble in cold nitric acid, but were soluble in muriatic acid heated to 60°. Even so far back as 1819, Mr. Brände, stated in his lectures at the Royal Institution, that the earth alumina is analogically considered as a metallic oxide. I feel sanguine that M. Chappelle's experiment may be repeated with greater success on a large scale, and by additional portions of salt and charcoal being intimately mixed with the powdered clay. Both soda and chlorine have considerable action on alumina and its metallic base. Why should not carbonic acid be formed by the burning carbon absorbing the oxygen from the alumina during its transition state, thereby leaving the metal at liberty? I hope those who have the means at their disposal will not fail to try the reduction of the metal from clay in large furnaces. I doubt not the ultimate success. That success will open a vast field to the industrial energies of the country, and far exceed in real utility the golden treasures of California and Australia. The useful application of such a metal I need not point out to your readers. In fact, the metal is superior to silver, on account of the unchangeable character of its influence. Why may we not hereafter have aluminiunised iron for our roofs and general new work, instead of the galvanised iron?

CHARLES M. WILLICH.

22, Suffolk-street, March 13.

## THE NEW REFINERY AND PUDDLING FURNACE.

SIR.—Being somewhat interested in the iron trade, it is with considerable pleasure read in your Journal the notices you are pleased to give from time to time of any improvements in that now important manufacture. On looking over your Journal of Saturday last, however, I was astonished at the remarks you make on a patent recently secured by Messrs. Talbot and Norris, for a combined refinery and puddling furnace, seeing that the same thing was patented by Mr. J. Jones, of Bilsthorpe, upwards of twelve months ago, and noticed by you, in one of your Journals, as far back as July 1853. I have before me the circulars issued by both patentees relative to their joint improvements (that of Mr. Jones, bearing date July, 1853, and that of Messrs. Talbot and Norris, March, 1854), and am quite surprised at the similarity of drawings and description. Mr. Jones claims "the combination of the refinery with the puddling furnaces, so that the refined metal may flow directly into the puddling furnaces, thereby dispensing with much labour, waste of material, and loss of time, compared with the ordinary method." Messrs. Talbot and Norris claim the principle of having refineries in combination with puddling furnaces, so as to secure the very same advantages which Mr. Jones has described.

I do not profess to be acquainted with the Patent Laws, but my greatest surprise is that such a second patent should have been granted, seeing that the existence of the first must have been well known to the Patent Office, as also to the principal ironmasters of England and Scotland. In the principle itself I can see no difference between the two; in the application of it there may, perhaps, be some slight modification, but which do not affect the question at issue. I will be glad, however, if you can afford me more information on the subject.

Glasgow, March 22.

## AMALGAMATION OF GOLD ORES.

SIR.—Numerous experiments made on gold ores by the various crushing and amalgamating machines of the present day, seem to have established, as a fact, that practically speaking all the gold contained in any ore (whether existing free, or in combination with chlorine, sulphur, &c.) is instantaneously amalgamated by mercury at the moment of crushing; and calculations have been made, based upon these experiments, showing that ores yielding only from 4 to 5 dwt. will pay for working. It is, however, contended that in practice such calculations will prove incorrect, because a considerable quantity of mercury during the operation becomes very finely granulated that, becomes suspended, and passes away with the water used in crushing, and cannot be again collected by any known means.

I do not profess to be acquainted with the Patent Laws, but my greatest surprise is that such a second patent should have been granted, seeing that the existence of the first must have been well known to the Patent Office, as also to the principal ironmasters of England and Scotland. In the principle itself I can see no difference between the two; in the application of it there may, perhaps, be some slight modification, but which do not affect the question at issue. I will be glad, however, if you can afford me more information on the subject.

W. L. WEBB.

## TREATMENT OF AURIFEROUS SULPHURET OF IRON.

SIR.—The attention of chemists, and of the mining world generally, has for some time been directed to the very important subject of the extraction of gold from auriferous sulphuret of iron; and although a cheap and efficacious mode of treatment has long been sought for, it would seem we are no nearer attaining the object in view than we were three years ago, when the question became a topic of public interest. The first step was to ascertain beyond all doubt whether the gold was held by the sulphuret in mechanical or chemical combination; and it is now agreed that it is combined mechanically; for otherwise the law of chemical equivalents would be violated, and the protosulphuret would contain 98 parts of gold to 44 of iron and sulphur. This being settled, the remaining questions are,—1. What is the best and most efficacious method of eliminating the sulphur?—2. What is the cheapest and most efficacious process for calcining or thoroughly oxidising the iron?

One mode adopted at mines abounding in auriferous sulphurets of iron has been to spread them out in the open air, and leave them to rust; water, and sometimes salt, are frequently applied to them. This is not only a long and tedious process, but incomplete and unsatisfactory. Another mode of treatment, is the roasting the sulphurets in the open air, with the addition of salt or soda, and stirring the iron particles to free them from the sulphur. If complete calcination be thus effected, not much further difficulty will be met with. But this mode of roasting is expensive, the quantity of fuel consumed being large, and the time and trouble great, even for calcining a few hundredweights of sulphuret. In the case of iron pyrites, or bi-sulphuret of iron, two roastings would be necessary, half the sulphur being given off by the first. My object in addressing this to you, is to elicit from some of your scientific correspondents a detailed statement of a mode of treatment which can be put in practice at mines, with respect to auriferous sulphuret of iron, and which is at once cheap, speedy, and efficacious.—London, March 23.

## GOLD IN ENGLAND.

The chairman of the Molland Company, at its last meeting, said it was the intention of the committee to await the results of Mr. Berdan's machine at the Poltimore Mine, for that, if they should be successful, he had no doubt but that the Poltimore Company, whose mine was situated so near their own, would readily purchase their ore. This hint, therefore, appeared to me to suggest the question whether, if the machine answers expectations, be destined to become, by a gradual and cautious enlargement of their operations as they see their way, the central reduction works of the Exmoor districts? and if so, it is always well to have our ultimate task, being an important one, in view from the first. The chairman of the Poltimore Company would almost seem to have had an eye to this, when he says in his letter to Mr. Berdan, Nov. 29.—"The company will, in all probability, in addition to the four machines already ordered, require many more." It is a pity, I think, that we could not have been an arrangement with the Britannia and South Poltimore works common to all; but the Britannia appear resolved to have one of Mr. Berdan's engines, and would, I suppose, be now unwilling not to turn their reduction works to some account; but would it not be advisable for them to await the event, so close at hand, at the Poltimore.

Remarkable for its violence and unimosity has been the battle of the machines, and the last Mining Journal a third competitor strenuously advances his claims, Mr. F. of whom I had not heard before, and who is free enough in finding fault with the inventions both of Mr. Perkin and Mr. Berdan. Here, however, let me do justice to the last-named gentleman, whose discretion and propriety of feeling, in maintaining, as far as possible, perfect silence against the din of opposition and depreciation that have assailed him, must command his conduct to every impartial observer; and his judgment, in this instance, I hope may be an earnest of the success that will ultimately and irreversibly crown his steadiness and perseverance.

But what I have been most forcibly struck with in the last number of your Journal is the letter of Mr. Evan Hopkins, from whom any observations on the geology and extraction of gold must carry weight; I certainly was not aware myself that the reduction of gold ores was such a matter of difficulty, and you see he treats all the new machines as superfluous. However, Mr. Hopkins is the particular friend of Mr.

David Musket, whose views of gold in England we are all well acquainted with, and who may possibly have influenced him to write in the tone he does on these subjects. In the last accounts received by the West Mariposa Company, from their agent, he augurs favourably of Mr. Berdan's machine, which has been set up, and which he says gives but little trouble, as it requires only two men to tend it for 24 hours; but in consequence of the severe weather it has been worked only two clear days. However cheap and effective Mr. Hopkins's water machinery may be, may not these new and more elaborate contrivances work better still? But does not Mr. Hopkins, though writing perhaps rather coldly and doubtfully on English gold, tend to confirm, by one remark, the value of the mineral property at North Molton, when he says—"That the auriferous pyrites are the *only productive* gold lodes known." I understand, moreover, all the gentlemen connected with the St. John del Rey who have seen the North Molton specimens consider that the lodes of Morro Velho and the Britannia and Poltimore are exactly similar. Mr. Hopkins, so high an authority, affirms that no gold quartz vein is productive at any depth. Is not the rich auriferous ore of North Wales quartz?—March 20.

A SUBSCRIBER.

or jury, in a case of trial, should, on examining models of this invention, with a suitable tram to work upon, be of opinion that the accident would not have taken place if it had been adopted, the damages would be greatly increased, on the ground that the railway company had not made use of those means best calculated to have prevented it.—Woodford-green, Essex, March 20.

EDWARD PALMER.

## EXPLOSIVE PROPERTIES OF GUNPOWDER.

SIR.—That gunpowder may be ignited by a smart blow of a hammer is very certain. This is a very old method of obtaining a light, and of every-day occurrence in the granite quarries of the neighbourhood. In the absence of lucifer-matches or other fire, the quarrymen, to obtain a light to fire their fuse in blasting operations, or to light their pipes, place a small quantity of gunpowder in a piece of cotton or linen rag, which is placed on a stone, and a smart blow given with a hammer, which instantly explodes it with a report, and kindles the rag.

GEORGE COPELAND.

Falmouth, March 20.

## [ADVERTISEMENT.]

## MR. PRIDEAUX AND THE SELF-ACTING VALVE.

SIR.—I now conclude my remarks on the supposed merit of the self-acting valve. In my last week's letter I have shown that, with reference to what issues from the chimney, the maxim *ne crade coloris*, may be as applicable to physical as to moral inferences. In practice, therefore, though not within the range of the Prideaux theory, it will be seen that no reliable estimate can be formed of the quantity of air that should be admitted, or excluded, at any one period, from the beginning to the end of a charge of coal, from the mere colour of the products after they have passed into the chimney. In fact, the pyrometer and the sight-holes, by which both the temperature and chemical character of the products can alone be ascertained, are the only tests by which we can judge whether the air admitted be *plus* or *minus* the required quantity. I now give the important details of the experiments made by Professors Sir Robert Kane and Dr. Brett in 1842:—

<sup>4</sup> TO THE DIRECTORS OF THE CITY OF DUBLIN STEAM-PACKET COMPANY.

"GENTLEMEN.—In accordance with your request, that we should proceed to examine into the construction and performance of the marine boiler furnaces erected at your works in Liverpool, upon the principle of the patent of Mr. Williams, we have to report, that we have carefully inspected the operation of these furnaces in their several parts, and also some others constructed in a similar manner, upon a large working scale, which are now in actual use in various parts of the town; and that we have instituted several series of experiments and observations upon the temperature produced by those furnaces, and the manner in which the fuel is consumed in them.

"In deducing from those experiments and observations the conclusions which will be found embodied in this report, we have taken into careful consideration the general mechanical principles upon which combustion must be carried on, so as to effect the greatest economy of heat and fuel; and we have examined how far those principles are attended to in the construction of the various kinds of furnaces.

## [EXPERIMENTS WITH COAL.]

Exp. 1. "When the fire was charged with coal, and air admitted only in the ordinary way (the passage of the air-distributors being closed), the entire interior of the flues were filled with a dense black smoke, which poured out from the orifice of the chimney in great quantity, and was observed through the sight-holes. The mean temperature of the flues in this experiment being found to be 650°.

"2. The furnace being charged in the same manner with coal, and the supply of air by the distributing apparatus fully let on, the smoke instantly disappeared. Nothing visible passed from the chimney. The flues became filled with a clear, yellow flame, which wound round at a maximum distance of 30 feet; and the mean temperature at the turn of the flue was found to be 121°. Hence the quantity of heat conveyed to the water through the flues was nearly doubled by introducing the air in this divided manner; and, whilst the fuel remained the same, the combustion was rendered perfect, and no smoke produced.

"3. The furnace being charged with coal exactly as before, to the aperture to the air-distributors was one-half closed. A gray smoke issued from the chimney. The flues were occupied by a lurid flame, occasionally of nearly 40 ft. in length; the mean temperature of the flues being found to be 985°. Thus, with half the supply of air, a mean condition was obtained between the dense black smoke and imperfect combustion of the first experiment, and the vivid combustion and perfect absence of smoke of the second. Having thus tested the circumstances of the combustion of coal, under different conditions of the furnace, we next proceed to ascertain the exact circumstances of the combustion of coke.

"4. The furnace being charged with coke exactly as before, the passage to the air-distributors was one-half closed. A gray smoke issued from the chimney. The flues were occupied by a lurid flame, occasionally of nearly 40 ft. in length; the mean temperature of the flues being found to be 985°. Thus, with half the supply of air, a mean condition was obtained between the dense black smoke and imperfect combustion of the first experiment, and the vivid combustion and perfect absence of smoke of the second.

"5. The furnace being again charged with coke, and the air-aperture was opened one-half. The flues then became occupied with a flame of various tints—blue, yellow, and rose-coloured—produced by the combustion of carbonic oxide and various other gaseous products. This flame extended through 25 feet. The mean temperature of the flue was then found to be 1010°. Thus, even with coke, the increase of available heating power, produced by the admission of air on Mr. Williams's plan, was found to be 300°, or three-tenths of the entire.

"6. The furnace being again charged with coke, and the air-aperture fully opened, the flame in the flue shortened to about 15 feet, and the mean temperature of the flue became 852°. Hence it appeared, that there had been a larger quantity of air admitted in this last case than was necessary for the combustion of the gases from the coke; and hence a cooling effect had been produced, such as to neutralise one-half of the advantage which would have otherwise been gained. It results from these experiments:—

"7. That the aperture of the furnace was sufficient for the proper combustion of coke, but was one-half too large for coke."

"8. That by the use of the air apertures, in the case of coke, all smoke is prevented, and the useful effect of the fuel much increased.

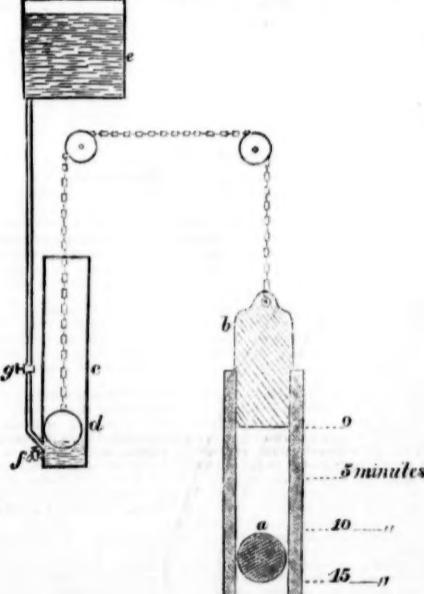
"9. That, even when coke is used, the heating effect is also much increased by the admission of air by apertures behind, or at the bridge; but it required only one-half the aperture admissible for coal, one-half of the advantage is again lost by the cooling power of this excess of air.

"10. Since, in all ordinary cases of practice, fresh fuel is added in moderate quantities, at short intervals of time, it was not found necessary to alter the rate of admission of the air by valves or other mechanism. A uniform current, admitting a quantity of air intermediate to that necessary for coal alone, will abundantly suffice for the perfect combustion of the fuel, and need not require any extra attention on the part of the workmen.

"11. In conclusion, we have to state, as our opinion, that the arrangement of furnace and admission of distributed air on Mr. Williams's plan, fulfills the conditions of complete combustion in the highest degree, as far as is compatible with the varieties which exist in the construction of boilers, the peculiar character of the coke employed, and the nature of the draught; the formation of smoke is prevented, and the economy of fuel we cannot consider as being less than an average of one-fifth of the entire in the case of coke, and of one-third of the entire when coal is used.

ROBERT KANE, M.D., M.R.I.A.; R. H. BRUTT, Ph.D., F.L.S.

I now annex a diagram of one of the valves adopted by me, but which, simple as it is, was finally discarded as practically useless, the pyrometer and the sight-holes, ever under the eye of the stoker, supplying all that could be desired. In this diagram,



"a is the orifice for the admission of the air; b the valve; c the cistern, with ball-cock to regulate the full of the valve; e the supply cistern; f the tap for letting off the water: a the orifice for the admission of the air; b the valve; c the cistern, with ball-cock to regulate the full of the valve; e the supply cistern; f the tap for letting off the water. During the first half of a twenty minute charge the valve has no effect, as during the next five minutes it gradually closes, and during the remaining five minutes it remains closed. It is to be observed, that it is only in consequence of the neglect of the firemen, in usually allowing the bars to be but partially covered near the end of the charge, that the shutting the valve becomes useful.

I have now to add that, agreeably to my call on Mr. Prideaux to test the originality, if any, of his mode of admitting air, I will, next week, lay on the table of the Institution of Civil Engineers models and drawings of the modes by which I have applied, during several years, the Argand principle to land and marine boilers and plate-heating stoves. I now take leave of Mr. Prideaux, repeating that he has not replied to any of my demands for proofs of his assertions.

C. W. WILLIAMS.

<sup>1</sup> Liverpool, March 21, 1851.

**COLLIERY EXPLOSION.**—A serious explosion of fire-damp occurred on Thursday week, about seven o'clock in the morning, at the thick coal pit of Messrs. Evans, at Leigh Hall, near Dudley, and seriously injuring nine men and boys, who, however, are expected to recover. The force of the explosion blew down a brattice in the pit, and thereby admitted a strong current of air, or the accident would, most probably, have proved fatal.

## RAILWAY ACCIDENTS.

SIR.—I beg to call your attention to a few further remarks on the subject of railway accidents, and to observe, that as all large locomotive bodies, except railway companies, have some resource to fall back upon in case of danger (shipping, for instance), it would seem, from the awful occurrences continually taking place on railways, that they ought not to be the only ones allowed to go without. An engine with a second set of wheels for this purpose, would seem as necessary as life-boats at sea, and a self-acting brake carriage at the end of each train would always prevent a disastrous collision from an up-coming engine, by conducting the force downwards to the rails. I have been informed by gentlemen of the legal profession that if a court

## Meetings of Mining Companies.

## WHEAL GOLDEN MINING COMPANY.

A meeting of shareholders was held yesterday, at the offices of Mr King, Austin-riars.

Mr. HENRY HOPPE in the chair.

The notice convening the meeting having been read, the secretary submitted the subjoined statement of accounts:

Balance last account	£ 625 3 11
Mine cost, Nov.	664 2 1
" Dec.	732 11 6
" Jan.	649 16 11
Merchants' bills, Nov.	107 3 10
" " Dec.	109 8 7
" " Jan.	82 3 3
Coal	230 19 1
Interest, discount, &c.	30 18 9 = £ 3232 1 11
Call	1250 0 0
Ores sold British and Colonial Smelting Company	874 3 4
Ditto, Mitchell and Sons	891 3 7
Spare materials	1 15 0 = 3017 1 11
Leaving balance against mine	£ 215 0 0
LIABILITIES AND ASSETS.	
Cash in hand	£ 219 8 7
Calls unpaid	21 5 0
58 tons ore sold (estimated)	1200 0 0 = £ 1440 13 7
Merchants' bills unpaid	239 0 0
Claims made by Peake Company	103 9 6 = 434 9 6
Leaving balance in favour of adventurers	£ 1006 4 1

In reply to the chairman, Mr. KING, the secretary informed the meeting that the whole of the dues were paid, and also every shilling of the debt due to the bankers.

The following is the report of Capt. John WILLIAMS:

Since your last general meeting, we are happy to say we have completed sinking the engine-shaft to the 167 fm. level, and commenced driving. In driving north, the lode is 2 ft. wide, worth 10 cts. of ore per fathom; ditto, south, the lode is 1 foot wide, worth 3 cts. of ore per fathom. In driving the 97 fm. level south, ground moderate, the lode is 1 ft. wide, producing 4 cts. of ore per fathom. Thorne's shaft is sunk 9 fms. 2 ft. under the 107 fm. level, and will be completed to the 117 next week, when we shall commence to drive north and south, and soon open good ore ground. In driving the 107 fm. level south, the lode is 8 in. wide, unproductive at present.—Young's shaft: In driving the 107 fm. level north the ground is good; and the principal timber was up at the engine-house. If they only completed what they commenced, I hope to resume active operations in the different levels throughout the mine, and I have no hesitation in saying that I shall succeed in raising a very large quantity of ore; but to enable me to do this more fully I hope you will not hesitate in providing funds to the extent of 7000/- to complete the additional machinery, &c. In conclusion, I am happy to inform you, by the steps your committee have taken, the credit of your mine is perfectly re-established.

The CHAIRMAN said they had now 2000 tons of ore at surface, waiting for the erection of the machinery, which he hoped would be in operation by April next. They had paid up every debt, and their anxiety now was to get money, in order that they might go vigorously to work the ensuing year. He (the chairman) then moved, and Mr. BIRKENHEAD seconded, a resolution that the report and accounts be received, adopted, and circulated amongst the shareholders.

Mr. BRAITHWAITE stated that he had just returned from the mines, and there was a more promising property for miles. The main shaft was delivered, and the principal timber was up at the engine-house. If they only completed what they commenced, he considered they would have a mine second to none in England, and one that would shortly pay dividends.

The CHAIRMAN said the next question was the amount of call: 5s. per share would yield 1682/-, which would enable them to properly develop the mine. He should, therefore, propose a call of 5s., payable in two instalments—the first 14 days after notice, and the second in six weeks.

A very angry discussion ensued, and several amendments were proposed, but eventually the call was carried, and Messrs. Sowell, Delamare, Beckers, Green, and Humfray were elected the committee of management, and Messrs. Birkenhead and Wood auditors.—The proceedings terminated with a vote of thanks to the chairman.

levels, for the protection of the workmen in bad weather, the want of which frequently occasions great loss of time.

Having thus alluded to the past and present, the committee cannot forbear, however briefly, referring to that somewhat dangerous subject—the future; and in so doing they would not present any exaggerated estimate of their anticipations, but simply give expression to the opinion of Capt. Colliver, after close investigation with the committee—viz., that he would guarantee within three months of the completion of the machinery, &c., a fair return to the shareholders. Taking into consideration that a great portion of the improvements that will lessen the cost of getting ore is made, remembering that at this moment the mine stands virtually free from incumbrance, and bearing in mind the important consideration that the credit of the mine is re-established, the committee do not hesitate to express their confidence in this statement, and, in conformity therewith, to recommend to the shareholders an energetic course, and to assure them that if the task is confined to their hands they will make no exertion to bring the capabilities of the mine to a speedy and decisive test.

March 21.—You have been informed in previous reports that very little work could be done in the months of Jan. and Feb at our mine; therefore, since the last bi-monthly meeting I have reduced the working expenses as low as prudence would permit.

I am happy to report to you, notwithstanding the interruption from the weather, and other casualties, the mine has not been idle. About 300 fms. (6 ft. to a fathom) of shoots have been completed, and about 220 fms. of inclines and tramways laid down. The roads from the lake to the mine have been repaired and completed throughout; the advantages to be derived from the same will be—first, in getting down the ore; we shall dispense with one-half the number of hands hitherto employed for that purpose, and even with the reduction we shall get down four times the quantity we did before. Secondly, the road across the lake to the mine now being complete, a much larger quantity of ore can be delivered at Penpax per day, at a saving of 2s. 6d. per ton. In addition to this, we have shipped 45 tons of ore, and increased our stock at the mine about 30 tons. From the general appearances of the mine, I am happy to say I have nothing to retract from my former report. The weather having now broken up, I hope to resume active operations in the different levels throughout the mine, and I have no hesitation in saying that I shall succeed in raising a very large quantity of ore; but to enable me to do this more fully I hope you will not hesitate in providing funds to the extent of 7000/- to complete the additional machinery, &c. In conclusion, I am happy to inform you, by the steps your committee have taken, the credit of your mine is perfectly re-established.

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A very angry discussion ensued, and several amendments were proposed, but eventually the call was carried, and Messrs. Sowell, Delamare, Beckers, Green, and Humfray were elected the committee of management, and Messrs. Birkenhead and Wood auditors.—The proceedings terminated with a vote of thanks to the chairman.

## SOUTH CORK COPPER MINING COMPANY.

At a meeting of adventurers, held at the offices, Great Winchester-street, on the 18th inst., Mr. E. H. RUTTERFORTH, in the chair.

The notice convening the meeting having been read, the following statement of accounts for the six months from September to February inclusive, was then submitted and passed:

Cost, September	£110 16 8
" October	91 7 19
" November	135 14 3
" December	109 7 4
" January	110 15 10
" February	101 18 10
Office expenses	44 16 10
Mr. G. B. EYTON, auditing	5 0 0
Mr. W. HOBSON, visit to mine	25 0 0
Mr. Foley	25 0 0
P. GRANT, subsist	30 0 0 = £ 789 17 7
Balance in favour of mine	2804 2 6
Total	£3594 0 1

Amount at credit last account £3264 19 2  
Interest on loan account 12 19 8  
Sales of ores... 261 1 6  
Interest of money on call... 24 19 9  
Subsist at mines 30 0 0 = £ 3594 0 1

The CHAIRMAN observed that the meeting had been delayed for the purpose of obtaining certain accounts and information which would now be laid before the shareholders. It had been publicly remarked that the South Cork Company was a swindle, and that they had no mine; the management had consequently directed their attention to obtaining and shipping a parcel of ores the first twelvemonth of working, which would be found by the statement had realised 2611 1s. 6d.: there was about one-third of the parcel the account of which had not yet come to hand, but would be carried to the next account; besides about 2000 worth of ore now ready for shipment at the mines. This result had been obtained entirely by hand labour from the old workings: the unwatering and crushing by hand process was both tedious and expensive, and would not leave a profit without machinery. It was in their power to declare a dividend, but it would come out of capital; they were, therefore, satisfied in having proved the incontestable value of the property—had taken the opinion of persons competent to advise, and now submitted for the approbation of the meeting the following plan of operations:—The old works, which are to the depth of 22 fms., should for the present be abandoned, and all their energies be directed to sinking the new engine-shaft, which was now down 12 fms., and was expected to cut the lode at the depth of 30 fms. By cross-cutting, the old works would be unwatered without any further trouble. They had obtained an estimate for a powerful water-wheel, which could be erected within three months; and had made an arrangement with the neighbouring proprietor, for the sum of 40/-, to carry the water-course through his grounds to the mine: this would enable them to draw the water from the whole of the works, crush and dress the ores, at a very trifling expense. The whole cost would not exceed 1500/-; and he considered he was justified in saying that within 18 months the proprietors might congratulate themselves in possessing a good, lasting, and legitimate dividend-paying concern. There were ample funds in hand for every requirement, and he considered their prospects very satisfactory.—The plan was then put to the vote, and carried unanimously.

Mr. FOLEY then read his report, which stated that a new lode had been opened upon, specimens of which were then on the table, which by assay was found to contain 31 per cent. of copper, and had the appearance of being plentiful, but could not be worked to advantage until the new shaft was deeper.

A SHAREHOLDER thought 25/- was too much to charge for Mr. HOBSON's visit; but the CHAIRMAN explained, that Mr. HOBSON had twice come from Sheffield to London, to consult the directors; had then gone to Ireland, remained a week, and was now present, with Mr. FOLEY, to give any explanation that might be required. It was necessary some one should go occasionally to report progress, and he did not consider that more than the expenses were paid.

A SHAREHOLDER then proposed that the unissued shares (about 4500) should be allotted, but this was declined by objecting to, on the ground that the vendors, instead of receiving one-half (10,000) of the shares for the purchase, would then be receiving two-thirds, leaving only one-third for working capital.

It was then moved, seconded, and carried.—That the unissued shares now in reserve should not be allotted, or made use of, without the full consent of the shareholders, at a general meeting.

Mr. FOLEY then proposed, that the committee of management shall be voted the sum of 50/- for their services for the past year. This was opposed, on the consideration that, from the manner in which the company was formed, the vendors had been enabled to present to each of the managers a certain number of free shares, which was supposed to remunerate them, until the mine was in a profitable condition, when the shareholders would take their services into consideration. It was put to the vote, and a majority being in its favour, was carried.

After sundry questions and conversation, the meeting separated.

## WHEAL FORTUNE (SOUTH TAWTON) MINING COMPANY.

A meeting of shareholders was held at the offices, Cusion-court, Old Broad-street, on Saturday last, Mr. OXMUND LEWIS in the chair.

The notice convening the meeting having been read, the following statement of accounts was submitted and passed:

Balance last account	£ 10 17 8
Cash for 150 shares	105 0 0
Cash	138 12 6
Cash due to Mr. KIES	10 8 10 = £ 554 19 0
Mine cost	175 5 11
Sundry merchants' bills	269 12 8
Office rent and sundry expences	80 17 8
Reports and expences to the mine	21 0 0
Advertising and printing	29 13 3
Serdan's experiment of gossan	4 6 6
Johnson and Co.'s general analysis of ditto	3 3 0
Expenses of obtaining grant of additional sets	19 0 0 = £ 584 19 0

The present liabilities of the mine amounted to about 1800/-, and the assets, consisting of the arrears of the last call, &c., to 1774.

The CHAIRMAN said, it was no doubt in the recollection of the meeting that when they last assembled it was determined that the forfeited shares should be put up by public auction, and 1000 were accordingly submitted to the hammer: the result they were all perfectly aware of, and he should have had much pleasure in congratulating the meeting upon their future prospects, had that result been more successful. Every inducement was offered to parties to become purchasers, and also to those who were the original holders of these shares, but he regretted to say the efforts of the committee were set at defiance, and every difficulty that could well be conceived had been thrown in their way. The consequence was that the shares had again fallen into the hands of the company. Mr. WARTON who had the disposal of the shares, had done every thing in his power, and had exerted himself to the utmost for the company. The fact of the lode having been come upon, and every information with regard to the property was furnished him, and spoken of by him at the bar, but, unfortunately, there was not a single bona fide bidder: there seemed, in fact, to be no confidence in the undertaking, and, as he had stated, the shares had reverted back to the company. It was now, therefore, a question whether they would first allow these shares to go into the market for what they would fetch, or whether they would put a nominal value upon them. He was sorry there was not a larger number of shareholders present, because the question had to deal with was one of great importance, and serious consideration. As long as he had been connected with the mine he had been, he regretted to say, in a defensive position; and although he could pass over in silence the malicious and disreputable attacks of parties who had been thwarted in their own selfish practices, he could not but remark, that from the commencement of his becoming a shareholder the mine had had every sort of difficulty

to contend with. Trials existed, and the committee had used their best efforts to work off these liabilities. Their exertions, however, had not been backed by shareholders so readily as could have been desired, and they still found themselves harassed by legal proceedings, that the mine was in debt about 1800/-, there were still many parties who had a high opinion of the property; but, in order to carry out the views of the committee, a larger amount of expenditure would be required than they were at the present time able to cope with. He thought that the worth proceeding with; but he must confess that to him it seemed almost a hopeless attempt to prosecute the mine further. The committee had worked hard, but had failed in carrying out their object, and they had not, he regretted to say, even obtained an engine which their exertions merited. With regard to the engine, though it had performed its work well, it was clearly not of sufficient power, would, therefore, be necessary to have additional steam-power, but that would involve additional outlay; and although there might, perhaps, be some difficulty in obtaining a steam-engine from Messrs. MEDWIN and HALL, in consequence of their having made arrangements with a private company, he thought it was possible that an engine might be got from those gentlemen for a reasonable sum.

As the meeting was not so numerously attended as could have been wished, he thought, in order to give every shareholder an opportunity of expressing his opinion upon the subject, that the better course would be to call a special meeting to determine what was the best course to pursue. There were gentlemen amongst the shareholders of very great respectability, and he wished them to look at the matter in the light in which he had himself viewed it—in its native deformity, and come at once to the determination either to abandon it, or give it a fair chance of success. Through the efforts of one of the shareholders, an additional seat had been granted to the company, the was in a very valuable district, and he had no doubt, when the lode was worked, would be found to be a continuation of the Ivy Tor Consols. The opinion of those well acquainted with the district was certainly favourable to the seat, and as there were certainly good ground to hope for success; but it could only be achieved by parties coming in who had more means at their command. He still had confidence in the undertaking, but with the present number of shareholders he did not think they would ever raise sufficient means to develop the property, let them try as they would.

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machinery to work, and that each of the four pans were producing  $\frac{1}{4}$  oz. of gold per hour. In all their difficulties he was very happy to inform them that they had an opportunity of getting through, as a gentleman had come forward and offered to erect one of Perkes's machines on the mine, and work it at his own risk; there could not be stronger evidence given as to the opinion entertained of the mine, as he was willing to take the cost of the machine from the produce of gold, or in the event of a failure to make no charge to the company. The chairman then read a draft agreement to that effect, and continued—that the committee being anxious to economise had accepted the resignation of Mr. Bladé, and appointed Mr. Nursey to the office; they had also been much strengthened by Mr. Ruding becoming one of the committee, who being such a very large shareholder, must be a further guarantee to the general body that their interests would be attended to. He wished to make an observation with regard to Mr. Scarth, as in the event of the meeting adopting the agreement, the office of gold superintendent at the mine would at once cease; and, although under the Costasack System situations were only held from month to month, the question was, whether he should not be presented with a sum of money, he having exerted himself to the utmost for the interests of the company. The next point was their financial position; the balance in favour of the mine was 1927, 5s. 4d., but taking into consideration the working expenses for the next three months, and the present liabilities, they were estimated to amount to 16327, 7s. 9d., the committee, therefore, had decided upon recommending a call of 2s. per share, which would completely free them, and leave about 450£ in hand. He believed he had now mentioned every subject of importance, but was ready to answer any question, and give the best information in his power to his fellow-shareholders.

The report and accounts were then unanimously adopted.

Resolutions were also passed for a call of 2s. per share, for accepting the resignations of the Rev. Josiah Bartlett as a member of the committee of management, Mr. J. Bladé as secretary and purser, and appointing Mr. P. F. Nursey, for the next three months.

The CHAIRMAN said, one of the principal features of the day was to submit the agreement he had just alluded to for confirmation, although the name of the party was not mentioned. The committee, of course, for their own sakes had taken care that the gentleman was in a position to carry out the agreement—he being perfectly satisfied with the quality of the gossan.

It was then unanimously resolved, that the committee be empowered to enter into an agreement for the erection of one of Mr. Perkes's machines at the mine, on the principle detailed in the draft agreement read by the chairman.

Mr. RUDING said he was a large shareholder, and felt extremely obliged to those who had come forward to offer to erect the machine. They were, in fact, experimenting with their money, and saving another call; it was also a proof that they not only had confidence in the mine, but in the machine. As a holder of 6000 shares, he begged publicly to thank the party for his disinterested conduct to the adventurers.

The CHAIRMAN read a letter from Mr. Scarth, resigning his appointment, and observed that his position was rather peculiar, as he expected a permanent situation, and the question was whether the committee ought not to offer him an amount as a compliment for his past services.

Several shareholders expressed their confidence in Mr. Scarth, and wished his services should be retained.

Mr. RUDING said some delay might arise in the erection of the machinery: he considered Mr. Scarth had acted in the most handsome manner, and he trusted they would meet him in the same spirit, and award him a sum—not as compensation, but a compliment.

It was then proposed, seconded, and carried unanimously, that the resignation of Mr. Scarth be accepted, and that the sum of 10 guineas be presented to him towards defraying his travelling expenses.

Mr. WOOLMER addressed the meeting at considerable length, urging the necessity of economy, the appointment of an efficient mining captain, and that the whole of the accounts should be furnished weekly, and remain at the office for the inspection of the shareholders.

The CHAIRMAN stated, in answer to a question, that they had at least 1500 tons of gossan at grass, and about 5 tons of copper ore of rich quality, worth from 20/- to 25/- per ton.

Capt. MOORSON said, with the exception of the barrels, the machinery now erected would be available, as a great saving would be effected by crushing the ore previous to submitting it to Mr. Perkes's machine.

Capt. CHARRETTE said, Perkes's machine would be completed in a few weeks, and delivered at the railway station at Reading. He would suggest that their engineer, Capt. Moorson, should go down to see it in perfect operation; and in order to save time, that the necessary platform at the works on the mine should be at once erected.

The following gentlemen were then elected the committee of management for the next three months—viz., Messrs. Joseph Cary, Maurice Evans, Chas. Clark, Shirley Wooller, J. C. Ruding, and Capts. Parry, Charrette, and Bladé.

The proceedings concluded with a vote of thanks to the chairman, and to the committee generally, for the zeal with which they have watched over the interests of the company.

#### WEST GRANADA (OR VERAGUAS) GOLD AND SILVER MINING COMPANY.

A meeting of shareholders was held at the London Tavern, Bishopsgate, on Wednesday.

Col. MORSE COOPER in the chair.

The notice convening the meeting having been read, the directors submitted a lengthened and satisfactory report, which set forth that a contract had been entered into for the purchase of the Segenbo Estate, which consists of 25,000 acres, and is represented to abound in mineral deposits, for the sum of 70,000£. These negotiations necessarily occupied considerable time, and were attended with much trouble, labour, and anxiety. The committee considered that the objects thus obtained would place the company on a much more solid basis than was contemplated at its formation—that of a gold mining company only. Although their contracts for sub-leases have not yet been carried into effect, the committee contemplate a successful termination to their labours; and by the last mail from Sydney letters were received from the manager, which announced that he had obtained the actual possession of the property; and that, if judiciously put up, would realise 200,000£, and even upwards, as an agricultural estate—the land being very good. It having become necessary to increase the capital of the company to complete the purchases alluded to, the committee have resolved to raise a further capital of 70,000£, which will be sufficient for the purpose, and leave a working capital besides. The committee also propose to re-construct the company in accordance with the requirements of her Majesty's Privy Council, and under the new title of "the Segenbo Agricultural and Mineral Company," and propose at as early a day as possible again to report their proceedings, and, if necessary, to call a general meeting in reference thereto. The accounts showed a balance in favour of the company of 12167, 16s. 11d.

The CHAIRMAN then moved the adoption of the report, which led to a lengthened discussion as to the right of shareholders to be present and vote.

Mr. Guedalla, Mr. Lindo, and Mr. Thornton, took an active part in the question, and expressed their opinion that the certificates gave that power.

The CHAIRMAN said the directors were desirous that shareholders should attend the meeting, and see and hear every thing connected with the company; but he did not believe they were qualified to vote unless they registered.

Mr. LINDO said he should like to know by what rule or regulation in the cost-book shareholders were excluded the right of voting?—The SOLICITOR to the company said they had taken eminent counsel's opinion upon the question; and the whole of the learned gentlemen to whom the point had been submitted were of opinion that shareholders must be registered to entitle them to vote; and it would not be equitable or fair to those who made themselves liable, in any way responsible.

Mr. Guedalla said he was not a registered shareholder, but if he found that gentleman of respectability would become so, he had not the slightest objection to follow the same course.

The CHAIRMAN said with respect to the report, he would say it was impossible, from a cursory glance at it, to rush down to the meeting, and fully dissect it. He was glad to see so favourable a report, but as it was only placed in his hand the evening before the meeting, he had really not had time to go into all its details.

The CHAIRMAN, in reply to Mr. Guedalla, said that shareholders had registered their names in the aggregate upwards of 35,000 shares.

Mr. LINDO expressed his approval of the course which the directors had adopted in the admission of shareholders, and was satisfied it would tend to disarm the unfavourable impression of this company out of doors. He contended, however, that shareholders were entitled to attend. He had heard the report read with much satisfaction, and he thought there were good grounds for believing that the property was exceedingly valuable. But the question was how they could make it valuable to the general body of shareholders, and was not for the board to consider in what way that could best be done. He was not for adopting the report as it present stood, nor was he adverse to it. It occurred to him that the board would best consult the wishes and interests of the shareholders, if they did not press for the adoption of the report, but that they should receive a deputation of shareholders to confer with them as to the best means of making the property available. He would, therefore, move that a committee of four shareholders be appointed, to confer with the directors upon the present position of the company and its properties, and for the directors to report thereon to the shareholders at an early day.—Mr. THORNTON seconded the amendment, and after a protracted discussion the report was unanimously adopted.

The motion of Mr. Lindo was also carried, and the proceedings terminated with a vote of thanks to the chairman and directors.

willing to do something to assist; if they would do so he was ready to subscribe his full portion of whatever might be agreed to by the shareholders.

The CHAIRMAN said there was no chance of raising the money under the present management. He would recommend the formation of a new company, changing every thing except the secretary.

Capt. CHARRETTE said, Mr. Guedalla thought they would succeed if they got up another company, with a more efficient direction. He had reason to say they had made one great mistake; but where were the parties who did not occasionally make a mistake? The Emperor of Russia was now making a very great mistake. He could assure them the directors were most anxious to see an efficient direction. They had been working hard for two years without getting one farthing; and he stated with the fullest confidence that they were all quite willing to give up and allow others to take their places, if it was to the interest of the company they should do so. (Cheers.)

Mr. BAKER said there appeared to be considerable misapprehension as to the object of the meeting on Wednesday. The mine could not remain in its present state, or be carried on without money; neither was it fair that those who would not come forward should participate with those who advanced additional capital, which would be prevented by dissolving the company. The object of the meeting was to give the fullest possible scope to the shareholders to make any agreement they liked for the working of the mine.

Capt. CHARRETTE said he wished to mention one important fact. It was a foreign undertaking, and no foreign mine with an outlay of only 20,000£. had paid dividends. The St. John del Rey had spent 120,000£., and the shares were at 2s. 6d.; but after subscribing an additional 20,000£., they had been enabled for years to pay dividends at the rate of 25 per cent. He had a letter from the mines, that the machinery was all there, and carried up to within 800 yards of the works; and he had no doubt, if they would lay out a few thousands, they would pay dividends. Let them remember the gold was already found, they had not to seek for it; and all that was required was to get the machinery in working order. The Nouveau Monde had expended about 100,000£. The Port Philip and Colonial about 50,000£.; the Colonial and Gold, 50,000£.; and the Agua Fria about 50,000£.; and yet none of those had yet paid dividends.

A SHAREHOLDER wished Mr. Ram to give his opinion as to the state of the mine.

Mr. RAM said, he had carefully analysed several samples, some of them yielding 200 ozs. to the ton. He had used his best exertions to test the quality of the ore, and in the iron pyrites, where the gold is generally found, the lowest result was 5 ozs. in the ton; and that amount, he believed, could safely be relied on. His attention had also been called to some soft stuff at surface, of which there were thousands of tons that did not require crushing, containing from 15 to 20 dwts. to the ton, and from which the gold could be extracted at an expense of from 15s. to 18s. per ton.

Capt. CHARRETTE observed, that a great deal had been said about the vendors, and their feelings towards the shareholders. The authorised agent of General Norris, the vendor, was compelled to leave for the Continent on business, but he held in his hand a letter deputing him (Capt. Charrette) to state to the shareholders, that he was desirous that they should have every possible facility afforded them for the protection of their interests, and that he was legally empowered to act on behalf of the vendor. The agent also suggested that they should appoint a committee from their own members, and report any equitable plan for the general benefit of the shareholders.

After some discussion it was agreed to defer the appointment of the committee until Wednesday next. The proceedings terminated with a vote of thanks to the chairman.

#### AUSTRALIAN CONSOLS GOLD AND COPPER MINING COMPANY.

A meeting of shareholders was held at the London Tavern, Bishopsgate, on Wednesday.

Col. MORSE COOPER in the chair.

The notice convening the meeting having been read, the directors submitted a lengthened and satisfactory report, which set forth that a contract had been entered into for the purchase of the Segenbo Estate, which consists of 25,000 acres, and is represented to abound in mineral deposits, for the sum of 70,000£. These negotiations necessarily occupied considerable time, and were attended with much trouble, labour, and anxiety.

The following gentlemen were then elected the committee of management for the next three months—viz., Messrs. Joseph Cary, Maurice Evans, Chas. Clark, Shirley Wooller, J. C. Ruding, and Capts. Parry, Charrette, and Bladé.

The proceedings concluded with a vote of thanks to the chairman, and to the committee generally, for the zeal with which they have watched over the interests of the company.

WEST GRANADA (OR VERAGUAS) GOLD AND SILVER MINING COMPANY.

A meeting of shareholders was held at Mr. Lindo's office, King's Arms-yard, on Thursday.

Mr. H. Guedalla in the chair.

The notice convening the meeting having been read, the CHAIRMAN said, the shareholders must be all aware that the directors had advertised a meeting to dissolve the company and divide the assets. He was extremely sorry to say that there was not a single shilling left, but the concern was from 3000£. to 4000£. in debt, which the directors had advanced. In this instance it was fair to state that it was only a case of gross mismanagement, no fraud had been committed; but the directors were men without any practical knowledge, taking a large concern which had been from the first in a crippled state from the want of sufficient funds. The prospectus, which was dated in 1827, stated that they had ore at surface ready for crushing which would produce 150,000£., and upon the faith of which the public had subscribed their money. The vendors, considering the property valuable, were to be paid 150,000£. for it, but to receive no money, shares, or other benefit until the directors had taken to the contract.

The next document he would refer to was the directors' report, dated the 7th of Dec., 1827. It was a very voluminous affair, giving an account of Mr. Champion going out and looking over the property, his return to this country, and reports of assays by Messrs. Johnson and Matthey, recording most excellent results. Upon these statements he purchased the shares at the highest figure—about 2s. 6d. He waited a long time for information, although he must admit he did not take much trouble; and it was fair to mention that several shareholders had told him that Mr. Web's, the secretary, was always ready to give every explanation. No public meeting having been held from December, 1827, he published in the latter end of last year some observations on the subject, and since then several had taken place. In February it was resolved to raise money upon debentures, but the public, from want of confidence, did not subscribe. The directors, who had taken no salaries or remuneration in any shape for their services, had already paid to the vendors in money and shares, 75,000£. For what? Had they the 185,000£. worth of ore at surface? They had ore at 2s. 6d. per share? He had heard they had a valuable property, and if so he had two or three different plans to propose for carrying on the concern. At one time the St. John del Rey was about to be abandoned, at another the Imperial Brazilian was at a very low ebb, when, by a call of 10s. per share, the price rose from 10s. to 17s. 10d. If this mine was like a patient requiring fresh doctors, let them get them, and then they might obtain splendid results; they had valuable machinery on the mine, amounting to 100,000£. and 9000£. appeared to have been fairly spent in wages. He had asked Mr. Web, the secretary, and also Mr. Ram, a very clever assayer, to attend; those gentlemen had very kindly complied, and no doubt would give all the information in their power. He (the chairman) would recommend that a small amount be subscribed to carry on the undertaking, or a committee appointed to devise some other plan.

Capt. CHARRETTE wished the secretary to read a letter received that day.

Mr. WEB then read a letter, dated the 23d of February, which stated that the whole of the machinery had been carried to the upper landing, and that the road was in course of formation.

The CHAIRMAN enquired the state of the climate, as he had heard it was so bad that in case of illness it would be necessary to keep two staffs, one to relieve the other.

Mr. RAM said he was there one month, but he suffered through not having a house to live in. At the mine it was not unhealthy, but as there was no mining going on, it was not likely the men would remain on the hill, and they came down to the swampy parts, where there were attractions.

The CHAIRMAN said it was most cruel to leave the men suffering withague, without even a tent to cover them.

Mr. BAKER said houses could not be built until people were sent out; and the directors were not to blame, as the very first persons dispatched were furnished with instructions and materials for erecting houses, but the fault was the gross neglect of the superintendent.

A SHAREHOLDER wished to know who valued the property at 185,000£., the highest produce of 98 ozs. of gold to the ton, and the lowest 12 ozs., as stated in the prospectus.

Mr. BAKER said he had been connected with the company from the commencement, and would answer the question. The prospectus distinctly set forth that the directors were not responsible for those statements which were made by the vendors, but they intended sending out to test them before completing the contract; and no shareholder could have been deceived, unless he wholly shut his eyes. General Norris was the vendor, and in a pamphlet, freely published, every item of information had been laid before the public.

Mr. CLAY said he found, according to Mr. Champion's report, the total profit for the first 18 months' working was estimated at 56,213£. There was nothing to disprove in that return, but he wished to know the further amount of purchase money, or other liabilities to the vendor, in case they did not receive the contract.

Mr. BAKER said houses were not to blame, as the very first persons dispatched were furnished with instructions and materials for erecting houses, but the fault was the gross neglect of the superintendent.

Mr. CLAY said the whole fault of the directors appeared to be undertaking the concern with too small a capital, relying upon quick returns to make it up.

After payment of the various expenses they had only 19,000£. to develop the mine, which had everything been done in the smallest possible time, might have been sufficient; but the money was gone before the contemplated work was done, and this, in a great measure, owing to the unfortunate selection of the manager, although they could hardly make the directors liable, as they received high testimonials previous to appointing him. He should say nothing more about the management of the directors; the question was, could they make that scrip, which was now mere waste paper, valuable? He happened to know something more of the mine than many now present. At the last general meeting he became a member of the committee appointed to look into the matter, and confer with the directors, and although two or three appointments were made he was the only one who attended; and from lengthened conversations with the directors and officers, he could state it to be his honest belief that they were in possession of an extremely valuable property. Whether too much was given for it he could not say, but he was satisfied they had a property well worth working, and the sum proposed (20,000£.) he believed would be ample for the purpose. The only drawback was the unhealthy climate, but even that was not the case on the mine, which was situated on a hill, and when in full work he believed there would be no complaint. The directors had given sufficient proof of their *bona fides*, by agreeing to subscribe 13,000£. out of the 20,000£., the vendor himself taking 1000 shares, and the chairman a very large number. The amount paid in cash to the vendor appeared heavy, but very little of the money found its way into his pocket, as it was spent in paying off claims upon the mine, that he might transfer it to the company free, relying on the profits he might realise as a shareholder. He hoped they would not go out of the room without coming to some definite arrangement, as to give 5s. per share upon those he held, to make them again valuable; but they must act in union with the directors to benefit themselves, for he believed that if only a sum of 5000£. was made up—if they only showed a disposition to come forward and support them, he had little doubt but they would endeavour to make up the difference. Let the shareholders come forward on Wednesday next, and show that they are

willing to do something to assist; if they would do so he was ready to subscribe his full portion of whatever might be agreed to by the shareholders.

The CHAIRMAN said there was no chance of raising the money under the present management. He would recommend the formation of a new company, changing every thing except the secretary.

Capt. CHARRETTE said, Mr. Guedalla thought they would succeed if they got up another company, with a more efficient direction. He had reason to say they had made one great mistake; but where were the parties who did not occasionally make a mistake? The Emperor of Russia was now making a very great mistake. He could assure them the directors were most anxious to see an efficient direction. They had been working hard for two years without getting one farthing; and he stated with the fullest confidence that they were all quite willing to give up and allow others to take their places, if it was to the interest of the company they should do so. (Cheers.)

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Capt. CHARRETTE said he wished to mention one important fact. It was a foreign undertaking, and no foreign mine with an outlay of only 20,000£. had paid dividends. The St. John del Rey had spent 120,000£., and the shares were at 2s. 6d.; but after subscribing an additional 20,000£., they had been enabled for years to pay dividends at the rate of 25 per cent. He had a letter from the mines, that the machinery was all there, and carried up to within 800 yards of the works; and he had no doubt, if they would lay out a few thousands, they would pay dividends. Let them remember the gold was already found, they had not to seek for it; and all that was required was to get the machinery in working order. The Nouveau Monde had expended about 100,000£. The Port Philip and Colonial about 50,000£.; the Colonial and Gold, 50,000£.; and the Agua Fria about 50,000£.; and yet none of those had yet paid dividends.

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From East Darren the agent writes, "The two levels at the 44, at Farrier's, look grand."

From Halamanning and Croft Gothic, we learn that the returns for the three months ending February exceeded the costs by above 60%.

The Old Trewether report of this week is highly favourable. A rich deal of silver-lead has been cut in the 27, and specimens from it, and also from the deep adit, have been received at the London offices, where they can be brought to surface, there will be a sufficient quantity raised by the period of the next bi-monthly meeting to pay more than a moiety of the whole expense of the mine, including the 20-horse power steam-engine.

The Mizen Head Copper Mining Company committee of management have concluded an arrangement with the proprietor for payment of the balance of 10000, due for the mine, and secured the necessary transfer of the property.

Great excitement has been caused in the market during the week, in consequence of the sudden stoppage of Wheal Chiverton and Wheal Speedwell, with our notice to the London shareholders, shares in Chiverton having been sold last week at 5d. and 6d., and the quotations at the beginning of this week were—Chiverton, 4½; and Speedwell, 3.

During the week, shares have changed hands in Alfred Consols, Altgold Consols, Bedford United, Black Craig, Botallack, Bryntal, Comford, Condurrow, Devon Great Consols, Dolcoath, Drake Walls, East Darren, East Pool, East Wheal Margaret, Gonamena, Great Onslow Consols, Great Polgoon, Hindington Down, Kirkcudbrightshire, Marke Valley, Merlin, New Wheal Bassett, Phoenix, Polberro, Tregony, South Tamar, South Tolga, South Wheal Frances, Tamar Consols, Tincoff, Treleath, Treleigh Consols, Trewetha, United Mines, West Providence, West Wheal Dartington, Wheal Butler, Wheal Clifford, Wheal Exmouth and Adams, Wheal Fanny, Wheal Golden, Wheal Margaret, Wheal Mary Ann, Wheal Trelawny, Wheal Tremaigne, Wrygellan, Reason, Bell and Lanarth, Birch Tor, Bodmin United, Borrington Consols, Boscombe, Bromley, Bryn-arian, Camborne Consols, Carbone, Carvannal, Cattie Dinas, Cilgaf, and Wentworth, Craigwen, Cuether, Cwrt Darren, Darren, Devon Kapunda, Eardington, East Barret, East Gunnislake, East Tamar, Eggar Lee, Fox Tor, Gally-Frith, Redlynch, Great Cowareh, Great Crinnis, Great Hewas, Great Wheal Alfred, Great Wheal Vor, Gustavus, Halamanning, Hawkmoor, Kenneggy, Keswick, Langford and Baring, Ludgvan Leaze, Messer, Mill Pool, Mixon Great Consols, Molland, Oak Tor, Old Trewether, Orseid, Penmaen, Polgar and Lanearrow, Prince Albert, Rinsey United, Sortridge Consols, St. Day United, Swanpool, Tavy Consols, Trebelle Consols, Treloegon, Trencut, Tyn-Berth, Union, Vale of Towy, West Alfred, West Seton, West Wheal Alfred, Wheal Cupid, Wheal Crebior, Wheal Friendship, Wheal Gaskus, Wheal Harriet, Wheal Kitty, Wheal Lemon, Wheal Mary Great Consols, Wheal Trefusis, Wheal Umy, Wheal Williams, Wheal Wrey, Wheal Zion, Anna Maria, Berricow, Bodewl, Britannia, Cambwrnaw, Carnelloc, Cathedral, Cavan, Cefn Gwyn, Clive, United, Collocombe, Combarth, Devon United, Devon Tin, Dinas Great Consols, East Polgoon, East Tremeyne, East Wheal Grit, Furdson Manor, Glenlann, Great Cambria, Great Sheba, Herodion, Lady Granville, New East Crowndale, Penlyne Court, Penquean, Perran Wheal Jane, Quintrell Downs, Red Dragon, South Devon Burr, Burr, South Devon Consols, South Tamar, South Trellawny, South Wheal Phoenix, Tamar Maria, Trannack Consols, Trequelle Down, Twardytreath, Welsh Potos, West Phoenix, West Polberro, West Sortridge, West Wheal Arthur, Weston, Wheal Edward, Wheal Gill, Wheal Lode, Wheal Pollard, Wheal Surprise, Wheal Victoria, Winstor, Duhrore, General Mining Company for Ireland, Kemnaw, Lackmore, Mining Company of Ireland, Wicklow, Crow Hill, Tassan, Ballymenone, Bandon Barony, Ballygally, Carrberry West, Clew Bay, Connemara, Irish Consols, Knockatrelane, Mizen Head, Royal Hibernian.

In Foreign Mines, business has been unimportant, and prices generally lower. Metcalfe, on Monday, were ½ to 1½ dis.; Sue River, ½ dis. to par; Jamaica Copper, par to ½ prem.; Port Royal, ½ to 2½ prem.; Clarendon of Jamaica, ½ dis. to par; San Fernando, ½ dis. to par; Peninsular Mining, 1½ to 1½ prem.; Rheubarb Copper, par to ½ prem. At the close of the market yesterday, with the exception of John del Rey, a general decline took place. Metcalfe were ½ dis.; Jamaica Copper, ½ dis.; Sue River, ½ dis.; Port Royal, ½ prem.; Cologne Mining, ½ dis.; San Fernando, ½ dis.; Obernau, ½ dis. Imperial British fell 1, business being done yesterday at 4. Linares also slightly declined, the closing price being 11 to 12. Pontaibaud were 15 to 17; Royal Santiago, 2½; United Mexican, 3½; Coate Copper, 4½; Copiapo, 10 to 12; Mexican and South American, 5½ to 7½; National Brazilian, 1½ to 2; St. John del Rey, 31 to 33.

The proprietors of the Burra Burra Mine of South Australia paid in December last the usual dividend of 100 per cent., and another of 100 per cent. was expected in March. Both these are out of proceeds realised even under the present state of labour, and it is said such is the favourable aspect of this great mine, that a continuance of similar dividends may be confidently looked forward to. The last price of the shares was 165L to 167L ex div.

At the Australian Consols Gold and Copper Mining Company meeting, on Wednesday (Col. Morse Cooper in the chair), the accounts showed a balance in favour of the company of £1267, 16s, 11d. The directors propose to raise a further capital of £10,000. The report was adopted, and a motion of Mr. Lindo, that a committee of four shareholders be appointed, to confer with the directors upon the present position of the company and its properties, and for the directors to report thereon to the shareholders, also was carried.

At Wheal Jamaica Copper Mining Company meeting, on the 20th Feb., in that colony, a report was laid before the shareholders, in which it was suggested that a committee of the subscribers be nominated for the purpose of arranging the terms on which the mines should be immediately transferred to the company, for the general benefit of the subscribers. A committee was at once formed, as a cost-estimating committee. The capital stock of the company was originally fixed at £10,000, in 12 shares, and 25,000 were reserved for Jamaica, of which a deposit has been paid on about 15,000.

A general meeting of the St. Jago Gold Nugget Company is convened for the 1st inst. A special meeting will afterwards be held, when a resolution will be submitted for the consideration of the present position and future prospects of the company, and for a return of 10s. per share—the balance to be held for interior operations, if desirable.

The Marquette Mining Company have received the following advices:

MARQUETTE MINES, FOR THE MONTHS OF NOVEMBER AND DECEMBER, 1853.

Ores raised, Nov. 1367 tons, Dec. 1354 tons; rough ores, remains, still stuff, and remains of remains stamped, Nov. 1780 tons, Dec. 1682 tons; average number of stamp-heads at work per diem, Nov. 97 7-10ths, Dec. 99; daily average per stamp and Nov. 12-10th cwt., Dec. 12-10th cwt.; fine gold obtained per ton of ore stamped, Nov. 8 dwt., 7 gr., Dec. 8 dwt., 22 grs.

Nov. Dec.

Gold obtained from the stamping-mills 731 9 761 3

Ditto on purchase 221 15 232 13

Total 973 4 993 16

Nov. cost \$15,885 | Dec. cost \$16,074 7

Returns 24,837 | Returns 25,867 5

SANTA ANA MINES, FOR THE MONTHS OF NOVEMBER AND DECEMBER, 1853.

Ores raised, Nov. 410 tons, Dec. 388 tons; mine produce for amalgamation, Nov. 57 tons 14 cwt., Dec. 46 tons 2 cwt.; rough ores stamped, Nov. 431 tons, Dec. 355 tons; average number of stamp-heads at work per diem, Nov. 34½, Dec. 28½.

Nov. cost \$6129 | Dec. cost 5513

Returns 5783 | Returns 5504

The Linares Mining Association have advised to the 11th March. In the 20 driving west of Warne's shaft, they had met with an improvement. Thorne's shaft, sinking under Rodriguez's wine, is worth 4 tons per fm. Acoedos wine, sinking under the 31 to communicate with the 45, is worth 3½ tons per fm. At Field's shaft, the 31 driving east has improved, worth 2 tons per fm. The footway shaft produces stones of lead.—Ore weighed in, 78 tons 12 cwt.

The Copiapo Mining Company have advised to the 22d inst. At Checo, in the 60, there was a large lode, producing stones of ore. In the 50 there was a large lode, 18 in. wide, of superior ore. In the 45 the lode was over 4 ft. wide, not rich, but there was a good bunch of ore. In the 35 and 30 are of average quality. At San Agustin, in the 33 fm. level, the lode was 3 ft. wide, with a leader of good ore. In the 25 fm. level the lode was 2½ ft. wide, 18 in. of which was good ore. In the 12 there was a good bunch of ore 1½ to 2 ft. wide. At San Carlos, the lode was 1½ to 2 ft. wide, and yielding well. At San Patricio there was no change. At Al Fin Hillada, in No. 1 level, there was good ore. No. 7 lode was 1 ft. wide, yielding good ore, worth 220 mares per cajon; No. 10 lode worth 400 mares per cajon; No. 12 worth 200 mares per cajon. In the 14, 15, and 16 the lode was increasing in size. At Desembocadora de Oro, copper ore, and gold-bearing mineral was being raised, but not in large quantities. Other parts of the property same as last reported.

The Peninsular Mining Company have received advices, dated the 14th inst., from their agents at Bilbao, stating that they have freighted the French schooner *Le Fernard*, Capt. Poisson (sixth vessel), at 17s. 6d. per ton for Swans, &c.; will load from 200 to 250 tons of copper ore, and will be despatched during this month. They have unexpectedly cut a small vein of lead ore in the drift of the No. 12 lead mine; this is something quite new. The despatch of this vessel will make the quantity of copper ore shipped to Swans a year amount from 800 to 850 tons.

The Liberty Mining Company have received advices from the Vaucluse Mine to the 29th Feb. The operations had been retarded by a heavy fall of snow 2 ft. deep, and followed by heavy rains. An additional whim was up, and the new tramway nearly finished. The cross-cut No. 7 had been connected with the new north shaft, and the driving was on, giving about 80 feet of backs. The east level had also been opened to the main level, A the ore there being 80 ft. wide, and looking very promising. At the south end of the main level they were in good quartz ore, 9 to 10 ft. wide, carrying gold and sulphure of iron. In the centre shaft the ground continues good, and they expected to strike the vein daily. The resident director states that the mine generally is looking very well, with abundance of ore, and he sees no reason to doubt a profitable year. It is not intended to take down the ore from the backs already so favourably reported on, as the levels supply more ore than the present number of stamp-heads can work on. Every foot now driven in the 80 ft. level gives 480 cubic feet of ore, and at the south end the vein is 70 ft. wide, so that there is an ample supply for 100 heads of stamp for years to come. Twelve stamps had run 213 hours during the fortnight, and had produced 47 ozs. 1 dwt. of fine gold. The contract for the erection of 24 extra heads of stamp was being proceeded with, and Coorhan's crusher had been removed from the mill-house. The resident director adds—"I will keep down expenses as much as possible. We go on well, and I think I shall show a balance in favour of the company by the end of July."

The Waller Gold Mining Company (Virginia) have received by the Europa further advices from their engineer, at the mines, dated the 20th February. Mr. Gregg has had careful experiments made to test the quality of the Cascalho, which have resulted most satisfactorily. He was, at the date of his despatches, erecting an additional stamp house and light stamp for the stamping of the Cascalho. Several pan-washings of the ferruginous sand had been made in the presence of Commodore Stockton's principal miner, and others, who think it to be far richer than anything in the mines in which they are employed, and concur with Mr. Gregg in the opinion that the profit from working the Cascalho and mine must be very great. The Cascalho drift is in 85 ft. further, and he has an average of 60 ft. of backs. From this tunnel the ore turned out in forming it is of good quality. Mr. Gregg is sinking an inclined shaft to the Waller vein, in order to strike at a lesser depth than he originally contemplated, as he finds it improve in quality more rapidly than he had anticipated. A shaft has been sunk on the brown slate vein. The ore is good. Another shaft has been sunk to the east of the Tellurium east and west Tellurium. The land had been put under oats and other crops, to afford food for the horses, oxen, &c.

The Nouveau Monde Company have advised from the superintendent in California, dated Mount Ophir, Jan. 27. He states that Mr. Bawden, the engineer and amalgamator, was very busy in attending to the amalgamating department, and superintending the construction of the new hydrostatic amalgamators, four of which, according to the plans sent out from England, he had decided upon putting up without delay; and he felt very confident of their efficiency. The crushing mill continued to work extremely well, and some tons of quartz from the Josephine, Pinetree, and Mount Ophir sets, which had passed through it, having been carefully sampled by Mr. Bawden, and assayed at the office of Messrs. Wm. Molitor, and Co., of San Francisco, the results of their assays were:—No. 1, Josephine sett, 35 ozs. 1 dwt. 10 grs. per ton; No. 2, Pinetree, 4 ozs. 3 dwt. 8 grs. per ton; No. 3, Mount Ophir, 2 ozs. 8 dwt. 20 grs. per ton. The monthly report on the mines which accompanies these letters is well detailed, and describes the progress at the mines and their present appearance in a very favourable light. Mr. Bradish, the cashier of the company, had just arrived from California, and describes the mines as of most promising character.

The Gold Mining Share Market this week, in sympathy with the general heaviness of the Stock Exchange, has shown a decided downward tendency. Even the stocks most in favour have suffered, and for many descriptions quotations are merely nominal. On the whole, in the total absence of demand, this market continues to wear a very unfavourable appearance. In another column will be found accounts from the gold diggings in Australia; these are important, inasmuch that they corroborate previous reports, that at the present there is no deficiency in the yield of gold. A falling off has been observed in several places, but this has been amply compensated by the increased yield at other localities. The price of gold due in California was \$17 40c. to \$17 45c. Coal and hardware were in demand, but other articles in general were at a discount. The American companies working gold mines in California appear to be progressing favourably, and making returns; the English associations, it would appear, are making experiments, constantly sending the returns of assays, but never showing any actual results; and it is a question to be considered by the shareholders, whether the whole capital of the several associations will not be absorbed by these trivialities? After two years' supposed working the public have a right to expect more than mere assays, which may have been made from "slogging stones," and the local superintendents of these companies should endeavour to set themselves right with their proprietary. The transactions on the Stock Exchange will be found in the usual place. The non-official are:—Golden Mountain, 2½ to 3 dis.; Australasian Mutual, 2½ to 3 dis.; London and Virginia Gold, 2½ to 3 dis.; Chancellorsville Freehold, 2½ to 3 per share; Lake Bathurst, 1½ to 2½ per share; Garnett and Moseley, 2½ to 3 per share.

## Transactions on the Stock Exchange.

Shares.	Paid.	Last Price.	Business Done.
100000 Agua Fria	1	1½ - 1½	1½
30000 Anglo-Australian Gold	1	½ dis. - ½ pm.	½
100000 Anglo-Californian	½	½ dis. - ½ pm.	½
100000 Australian	2	1 - 1½	1½
60000 Australian Cordillera	6	1½ - 2	2
160000 Australian Freehold	1	1½ - 2	2
50000 Avg. Minis	1	1½ - 2	2
200000 Baden, Grand Duchy of	1	1½ - 2	2
210000 British Australian Gold	1	1½ - 2	2
800000 Clarendon Consols (Jamaica)	½	1 - 1½	1½
100000 Colonial Gold	1	1½ - 2	2
70000 English and Australian Copper	5	1½ - 2	2
100000 Great Nugget Vein	1	1½ - 2	2
60000 Liberty	1	1½ - 2	2
100000 Marquita	1	1½ - 2	2
60000 New Granada	1	1½ - 2	2
30000 Nouveau Monde	1	1½ - 2	2
100000 Port Phillip	1	1½ - 2	2
100000 Pontaibaud Silver-lead	20	15 - 17	17
60000 Quartz Rock	1	1½ - 2	2
50000 South Australian	1	1½ - 2	2
70000 Waller	1	1½ - 2	2
100000 West Mariposa	1	1½ - 2	2
100000 Yuba	1	1½ - 2	2

## LEAD ORES.

TICKETINGS FOR ABOUT 100 TONS OF NEWTONARDS LEAD ORE.

Pontifex and Wood (purchasers)	£15 10 0
Walker, Parker, and Co.	15 6 0
Panther Smelting Company	15 6 0
Sims, Willyams, Nevill, and Co.	15 5 0
John P. Eytom	15 3 0
Newton, Keates, and Co.	15 2 6
The Washington Chemical Company	14 12 6
John Bibby, Sons, and Co.	14 12 0
Locke, Blackett, and Co.	14 0 0

TICKETINGS FOR ABOUT 50 TONS OF FOXDALE LEAD ORE.

Douglas, Isle of Man, March 21.	£20 0 0
Pontifex and Wood (purchasers)	19 16 0
Walker, Parker, and Co.	19 10 0
Locke, Blackett, and Co.	19 10 0
John Bibby, Sons, and Co.	19 6 0
Newton, Keates, and Co.	19 3 0
Panther Smelting Company	19 1 0

Sold on the 17th March.

Mines.	Tons.	Price per ton.	Purchasers.
Wheal Mary Ann	70	£27 19 6	Walker, Parker, & Co.
Swanpool	18	£19 5 0	Walker, Parker, & Co.

Sold on the 18th March.

ditto	16	£19 5 0	Walker, Parker, & Co.




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## NOTICES TO CORRESPONDENTS.

" Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

LAKE BATHURST GOLD MINING COMPANY.—In answer to the enquiries of "P. M." of Ipswich, I beg leave to inform him, that after having at great expense collected the facts relative to this windle, I laid them before an eminent counsel, and, acting under his advice, a suit in equity has been commenced, by which, it is hoped, something will be recovered for the unfortunate holders.—H. GUEDELLA: 17, King's Arms-yard, London, March 20.

SIR: The concluding remark of Mr. Guedella's letter of the 10th instant, that "one should be acquainted with the characters of the directors," and not to entrust ones capital into the hands of those with "whose integrity and position one is unacquainted," is so just that it only requires particular (instead of general) application to make it useful; that application, I am sure you, as the guardian of the mining interest, will always be ready to give. A letter of last week, giving some curious information of the Old Trewether Consols Mine, might perhaps have been spared, if the writer had enquired the position of some of its directors.—J. C.: City, March 22.

"J. H." (Wollaston) had better consult a mining broker; we never interfere in share dealing.

"N. G." (Coseley, near Bilton).—Statistics of Coal, by R. C. Taylor (John Chapman, 142, Strand); Dunn's *Wining and Working of Collieries* (Simpkin and Marshall, Stationers' Court); A Practical Treatise on *Wining and Working Collieries*, by John Hedley (John Weale, High Holborn); or, for more general knowledge, you might consult *Geology—Introductory, Descriptive, and Practical*, by D. T. Ansted, M.A., F.R.S. (John Van Voorst, Paternoster-row.)

MINING EXCHANGE.—SIR: I had much pleasure in reading the able remarks of our friend, Mr. Guedella, in last week's Journal, on the "Practicability of a Mining Exchange," and trust the parties interested will assist in carrying out such a desirable object. I am fully satisfied it would be the means of bringing many capitalists into the mining field, who at present are, and with reason, really afraid to enter while the present unsatisfactory mode of transacting business exists.—A SUBSCRIBER: *Derby*, March 22.

"W. D."—The correction reached us too late to be attended to.

WHEEL ZION.—SIR: A meeting of adventurers having been called, I should be glad, through your Journal, to urge on their consideration, —1. Whether perpetual changes are beneficial? —2. If change they must, whether the committee ought not to state before holding their meetings what changes in their rules and regulations they intend to propose? —3. Whether one of the changes should not be, that a statement of the work done, and to be done, and accounts, should be laid before the shareholders a week previous to the meeting, that they might have time to consider them? —A SHAREHOLDER.

LIBERTY MINING COMPANY.—The stuff hitherto operated on by the stamps has only been of rough quality, obtained in driving the levels. It is expected that the 24 additional heads will be in working order within one month, when they will immediately take down the backs, which are known to be extremely rich.

"A DUPE."—We refer our correspondent to the paragraph which appears in another column on the subject of his letter.

PROCTER UNITED—WHEAL TREWANE.—SIR: Seeing my name mixed up in a letter from Mr. Smith, respecting Proctor United Mines, I have only to say that their dispute as to the legality of their proceedings was not my province, or the object of my visit, but merely to express an opinion as to the value of the acquisition. The ore at the surface is a sufficient proof of the existence of the "oyster"; the shells I must leave to the contending parties.—G. HENWOOD: *Sticklepath*, March 20.

"F."—Copeland's blasting cartridges are approved of by the Admiralty. Last year the inventor supplied Her Majesty's steam-sloop *Phoenix* with a quantity, and within the last few days has again supplied her with a similar quantity, for the purpose of blasting ice in the Arctic Seas. For further particulars, address Mr. Copeland, Falmouth.

"R. P. S." (Sheffield).—The company, if not dissolved, is insolvent; they have had no meeting for six months; the treasurers are abandoned, and the officials are not to be found. Mr. Matthew Darwen, the purser, is, we believe, in Dublin.

GOLD AMALGAMATING MACHINES.—A correspondent, who states that he is deeply interested in the question of which is the best machine for reducing metallic ores, &c., suggests the propriety, as many patents have been taken out for crushing and amalgamating machines, of waiting a few months, until some of them are brought into active operation, and thus prevent disappointment, and eventually save both time and money, by having the opportunity clearly and fully to ascertain what is really the most efficacious principle to be adopted.

"H. E. L." (Corsley).—Wheal Mary Ann, which was advertised to be wound up, is a lead mine, situated at Lydford, Devon.

THE COST-BOOK SYSTEM.—A correspondent of long experience in mining adventure, and of working under the Cost-book System, requests us to call attention to those who are interested in similar pursuits, and induces them to watch the progress of Mr. Collier's bill, recently introduced into Parliament, to define what the Cost-book System really is, and to extend its operations. He demurs to the doctrine that it is the duty of the purser to enter the name of any person in the Cost-book in obedience to a notice of transfer, as opening a door to fraud, the admission of men of straw, and enabling any holder to get rid of future liability, should the mine show symptoms of failure. He considers such is not the general custom, nor that it should be; a prudent purser would enquire into the character and solvency of any proposed new shareholder. Should such a custom, legalised by age, exist, and could be shown to prevail, there would be the greater urgency to prevent its practice forming part of the new law.

CARSON CREEK MINING COMPANY.—The reason why a meeting of the shareholders has not been called prior to winding-up is, we understand, that the assets in California are not yet realised. As soon as this takes place, and the accounts are forwarded here, the company will be dissolved.

"R. L." (Oxford-terrace).—The thirteenth annual meeting of the Peninsular and Oriental Steam Navigation Company was held on the 6th Dec. last, a full report of which will be found in the *Mining Journal* of the 10th. The company's fleet, including the various services between Southampton and the Mediterranean, the East Indies, China, and the Pacific, consists of 51 ships, of 65,185 tons burthen, and 15,610 horse-power: of these 33 are being built and fitted out, six are coal and store ships, and two steam colliers. The dividends are equal to 6 per cent. on the capital. The offices are in Leadenhall-street, opposite the East India House. C. W. Howell, Esq., is the secretary.

LACKAMORE COPPER COMPANY.—"J. W."—We have received frequent communications on the subject of this company, which we shall answer more fully next week, as the secretary has been absent in Ireland.

"One Interested" (Fulham).—In the *Mining Journal* of the 23d April, 1853, will be found some interesting historical notices of the copper mines of Lake Superior, and the lead deposits of the United States; and in the Number for the 14th May are some statistics of the Lake Superior mines, giving the names of each company, the number of the shares, amount paid up, and the then market price. We expect these details will supply the information desired by our correspondent.

MIZEN HEAD MINING COMPANY.—The querier propounded we shall endeavour to solve on our next.

TAMAR MARIA MINE.—SIR: A general meeting of shareholders in this company was held last January, at which a resolution was passed, reducing the 17. shares to 10. I am informed that the parties attending that meeting represented 3000 shares out of about 4000 subscribed; but I am also informed that the 3000 were chiefly free shares, given in part payment of the purchase money for the mine. As the alteration operates most injuriously upon the shareholders who have invested their money in the adventure, I wish to know whether they had the power to do so without the consent of every holder.—E. Scarborough, March 23.

REFINED ARSENIC.—"W. P. C." enquires what is the present market value of this article, and where the best quality is to be readily procured?

THE LIBERTY MINE.—SIR: Seeing no reply to an enquiry relative to the Liberty Mine, a week or two since in your Journal, expressing discontent at the non-realisation of anticipations held out by the directors, I take upon myself the freedom of stating, from official information, that the cause is the inapplicability of the crusher. Stamps have elsewhere been stated to be in course of erection in place thereof; and when they are brought to bear, the strong views held will soon be tested. As a holder of 150 shares, now at a discount of some great importance, I have reason to regret the loss occasioned by the above circumstance. The gold produced from the ore dressed augurs favourably for the future results.—A. S. KINGDON: *Bideford*, March 22.

AFFLEDORE MINE.—"X." a shareholder, would like to know of the committee why the engine and materials at the mine were not put up to public competition, instead of accepting the offer of the purser, in taking to it for 600/-, which, I presume, cannot at all be satisfactory to the shareholders, when the merchants' bills alone are upwards of 2000/- for articles supplied, all of which have been paid.

"T. A." (Friars, Oxford).—To find the specification of the hay-making machine alluded to, our correspondent should refer to the list of patents for the past two years.

"J. Y." (Mincaster).—Carbonate of barytes, or witherite, is easily distinguished from the sulphate; the colour of the former is greyish and yellowish white, pale bluish grey, greenish grey, pale wine yellow, and pale flesh red, and crystallises in six-sided rhomboidal prisms, accumulated with six planes, and in double six-sided pyramids. The colour of sulphate of barytes, or lamellar heavy spar, to be of commercial value, should be snow or milk white, although large deposits are found passing through the various tints or shades of red, yellow, blue, green, and brown; it crystallises in rectangular four, six, or eight-sided tables, bevelled on the terminal planes, perfectly lamellar, the fracture foliated, brittle, and frangible. The most certain test to the inexperienced is, however, nitrous acid. Witherite, a carbonate of lime, dissolves in nitrous acid; sulphate of barytes does not; they both dissolve in muriatic or nitric acid.

"A Miner" (Rhyd).—The only way to obtain payment for the nine weeks' labour is to summon the proprietors to the County Court. It would be illegal to seize the ore which is at grass, in order to pay the defalcations of the adventurers. It could only be taken by an execution, which must be legally performed; if done otherwise the parties offending would render themselves liable to a prosecution.

"C. P." (Newport, Lancashire).—The *Mining Guide* contains no instructions on assaying, it being merely a source of information as to the locality of the various mines (British and Foreign), the offices, purser, secretaries, captains, and agents, with the kind of metal produced. The works best for our correspondent to consult are—Muspratt's *Pratfall on the Blowspears* (Taylor, Walton, and Maberly, Upper Gower-street); the *Assayer's Guide*, by Oscar M. Lieben (Trubner, 12, Paternoster-row); and the *Manual of Metallurgy, or Practical Treatise on the Chemistry of the Metals*, by John Arthur Phillips, F.C.S. (Knight and Son, Foster-lane).

"Black Diamond."—Inequitable as the laws relating to collieries are to insure the lives of the working miners, the Legislature appears to have carefully provided for such contingencies as suggested by our correspondent. The 7th Will. IV., and the 1st Vic. C. 9, enacts that whoever shall unlawfully and maliciously set fire to any mine or coal, or Canal coal, shall be guilty of felony, and, being convicted, shall be liable, at the discretion of the Court, to be transported for the term of the offender's natural life, or for any term not less than 15 years; or to be imprisoned for any term not exceeding three years. The 7th Geo. IV., declares, that any person convicted of pulling down, destroying, or rendering useless a steam or other engine or machinery employed in working mines, shall be adjudged guilty of felony, and subject to such punishment as the Court may award.

We have particularly to request that subscribers and others, in paying accounts, will send cheques or post-office orders, in preference to postage-stamps.

GIBSON v. ARROWSMITH.—This action, of which our readers have already seen something, will be tried at the ensuing assizes for Surrey, to be held at Kingston this day, by a special jury; and as attempts have been made by the defendant to stifle the enquiry that will be made of an unparalleled character, we intend to have our special reporter present, and shall furnish our readers with a full and detailed report of the trial, as the plaintiff's cause of action in this case involves the interest of the mining world at large.

"R. H. H." (Ipswich).—As it appears a correspondence has taken place between your London agent and the party in question, it would be better to apply to him. We are not in any way responsible for advertisements which may appear in the Journal, any more than our contemporaries.

MR. DAVID MUSHET, ON THE SMOKE QUESTION—AN IGNEOUS THEORY; "S. P. W." (Gosport), ON THE PRACTICABILITY OF A MINING EXCHANGE, AND NUMEROUS OTHER VALUABLE PAPERS, ARE UNAVOIDABLY POSTPONED UNTIL OUR NEXT.

WORKS PUBLISHED AT THE MINING JOURNAL OFFICE, 26, FLEET-STREET, LONDON:

GEOLOGY AND MAGNETISM. BY ERAN HOPKINS. 16s.

GOLD ROCKS OF GREAT BRITAIN. BY JOHN CALVERT. 10s. 6d.

WINNING AND WORKING OF COLLIERIES. BY MATTHIAS DUNN. 12s. 6d.

TABLES FOR PERSONS EMPLOYED IN MINES. BY WM. WHITBURN. 6s. 6d.

SUPPLY OF WATER IN SWANSEA. BY MICHAEL SCOTT. 10s.

PROGRESS OF MINING IN 1853. BY J. Y. WATSON, F.G.S. 1s.

STATISTICS OF THE MINING INTEREST FOR 1853. BY W. H. CUELL, Esq. 6d.

GLOSSARY OF ENGLISH AND FOREIGN MINING AND SMELTING TERMS. 2s.

THE MINING GUIDE. 2s. 6d.

THE COST-BOOK—TAPING'S PRIZE ESSAY. 6d.

THE COST-BOOK SYSTEM: ITS PRINCIPLES & PRACTICE EXPLAINED. 6d.

\* It is particularly requested that all communications may be addressed—

TO THE EDITOR,  
Mining Journal Office,

26, FLEET-STREET, LONDON.

Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

## THE MINING JOURNAL

### Railway and Commercial Gazette.

LONDON, MARCH 25, 1854.

The cloud of war is rolling onward to the North Sea and Baltic, and the means of war are totally changed. If actual war bursts forth, the power of England is to be directed against the very heart of the enemy, — strong in position, obdurate and fierce in resistance. In the Baltic, the naval might of England is to be developed against the northern foe, as it formerly was in the more southern seas against our old enemies. In this struggle, perhaps more lasting than we think, the important question has arisen—how is the chief element in modern war to be supplied?

The supply of steam coal, next to that of seamen, and scarcely inferior to it, is, under present circumstances, of the highest consequences to the navy. The hour of victory may be lost, and the hour of disaster created, by restricted action, or limited means of operation in the Baltic steam fleet.

Not to achieve victory is to sustain defeat in such a war. To obtain that victory with such a fleet, the means of action must be always at command.

That means in full supply can only be obtained at one port and from one district—Northumberland, on the Tyne; except in the distant districts of Wales, which supply a magnificent anthracite. There is no other accessible steam coal in the kingdom. If the Tyne cannot yield it for the Baltic fleet, then a course of 1400 miles must be run to Wales and back, with all the risks and delays of such a long and tedious voyage. The Tyne has, however, been selected, and English and French war steamers, as well as transports, have been ordered thither; but there is an impediment in the way. It will be seen, from a statement in another column, that the condition of the navigation of the Tyne is such that these steamers and transports may be detained for weeks, at the time of their greatest requirement: thus would the fleet be cut short in its career, or paralysed, its spring of action wanting. At this season especially, frequently for a lengthened period, is the largest mineral port in the kingdom hermetically sealed, enclosing hundreds of ships, with thousands of tons of coal on board for the markets of the world.

During the month of January, while the inhabitants of London were suffering severely from scarcity of fuel, the prices more than doubled, and while some of the gasworks were within 24 hours of ceasing their operations, leaving districts of this great city to the fearful consequences of darkness, there were 200,000 tons of coals for the London market on board ship, in the Tyne; imprisoned three or four weeks, till the sea fell on Tyne Bar, and unlocked the harbour. London, suffering under this dearth, is calculated to have lost, in the month's consumption, upwards of 270,000 tons, while the sufferings of the poor were incalculable. There is great depth of water within the harbour of the Tyne, as the building and fitting out of the Sardinian frigate, the *Carlo Alberto*, of 2500 tons, and, at the same time, the "riding" of 1500 laden ships demonstrate; yet the bar at its mouth is a perpetual impediment to its free navigation, when the wind blowing easterly raises the sea high upon it. Thus it is that in this war, where action and energy must be incessant to be successful, there starts up this giant cause of obstruction at the Tyne Bar, which may bring on more danger than the enemy. Always obstructing the peaceful operations of 3,700,000 tons of shipping, advancing the prices of coals in London to sometimes double their usual value, and now an impediment in war it has even, if it were possible, worse results. It scatters in the most dreadful manner destruction and death amongst the commercial marine. Within a radius of 100 miles of the Tyne more than one-fourth of the total wrecks of the kingdom occur. In the month of January, while London was reduced to the last extremity for fuel, waiting for the northern fleets, the easterly gales that embargoed them seized upon nearly 400 vessels on the north-east seaboard, and within three days destroyed 110 of them, with numerous valuable lives; all of which there can be no doubt, would have been saved had the obstruction at the mouth of the Tyne been removed. Vessels that had escaped from it a day or two before were driven by the gale to Scotland, and found safety in the Forth. Six weeks afterwards, many of them, yet on their London voyage, returned to the Tyne, which they had left the previous month, for a refit and provisions, after their struggles, having got no further than their port of departure. The terrible scenes of appalling death that were then enacted on that rocky coast will never be forgotten amongst the northern ports.

This state of things, which we have briefly described, has its only source in the obstructions at the mouth of the Tyne, which are removable at no great cost, considering their enormous evils. Deeply interested in the progress and prosperity of the mines, and anxious to aid in obtaining facilities for their operations wherever they may be required, and not the less pitying these misfortunes, and loving our country, the advanced guard of civilisation and freedom, we rejoice to learn that this common obstruction to all those objects is likely soon to be removed. When we reflect that the south coast, with all its tonnage for 200 miles and the southern-bound tonnage of the Thames, amounting on the whole to about 5,500,000 tons, is having harbours of refuge constructing, at a national cost already of 1,200,000/-, last year receiving 200,000/-; and that the tonnage of the north-east coast, nearly one-half of which belongs to the Tyne, amounting to 7,600,000 tons, has not had one shilling of public money expended upon it for its security, we deem it high time that something should be done for it. This we find to be more imperative, when we ascertain that upwards of double the wrecks and destruction (247 to 116) ravage the north-east coast more than that of the south. It is surely not just and proper that large amounts of national money should be expended for the protection of fewer lives and less amount of tonnage, than one-fifth of the lives and property of the kingdom afloat should receive no assistance whatever.

In a matter with such important consequences, and at this time above all, with such national evils, we cannot, without a public protest against it, see such injustice perpetrated. Let not the excuse be offered that on an average the southern vessels are larger and more valuable than that of the north-east; it is simply an error. If the parliamentary return of shipping of last session (No. 299) speaks truth, the average size of the south-coast vessels is only 76 tons, and combined with that of the Thames, only 130 tons, while that of the Tyne itself is 138 tons.

From some unaccountable circumstance, the immense importance of the north-east coast, their ships and cargoes of mineral and merchandise, have been overlooked, and that nearer the seat of Government received an undue importance and aid. The subject has been ably developed by the important deputations lately from the north; and it is impossible it ever can be settled till the spirit of common justice and foresight be administered equally to both.

The Tyne Commissioners, it appears, are prepared to advance 200,000/- to remove the evil-producing source at Tyne Bar. The works to do this great thing have been projected by the Admiralty engineer, and urged upon the Commissioners for speedy execution. It is thus demonstrated that they are deemed naval works by the naval authorities. It happens

that the Commissioners are only empowered by law to raise the amount specified—200,000/-; while these works of the Admiralty (for they are theirs by adoption, and their engineer) are to cost nearly double that amount. How these constructions are to be raised, except by national means, the Admiralty, perhaps, can say. If they are to be left unfinished, they will constitute a double reef of rocks at the mouth of the Tyne, adding to its dangers.

Neither is the local interest so much involved in them as those of the people of London and the nation: closing this coal port for a few weeks now and then enhances the price of coals, and transfers a large amount of money annually from the metropolis to the north that would otherwise be saved to the former.

For the sake of that justice which ought to be meted out equally to all; for war operations, in which the glory and position of the country are involved; also for the economic advantages of the people of this great metropolis; and on behalf of numerous valuable lives and much national property, we demand that national means be freely accorded to the Tyne for those national works. We in London have a right to ask of all the metropolitan members to give their best support to this national object, which, in addition, is to free us from those vicissitudes in supply, sometimes dearth, of coals, that double the price, inconvenience more or less every family in London, and to the poor bring physical misery of the sorest kind.

Since the above article was in type, the Earl of ELLENBOROUGH, on the presentation of a petition from Mr. MATHER, has ably developed the subject in the House of Lords. The opinions expressed of the necessity of these works at the Tyne, and the generous sentiments then delineated in reference to the seamen, reflect great credit upon his lordship's judgment and patriotism. This is a strong additional support of the views we have just taken.

The lamentable explosion at the Ince Hall Colliery still excites much commiseration for the fate of the 89 victims who were destroyed by the awful catastrophe, and forms the subject of so many communications, that they are too numerous for insertion. We have, however, received some remarks from Mr. JAMES DARLINGTON, of the Ince Hall Coal and Canal Works, in reference to Mr. J. RICHARDSON's observations in our last Journal, which we have felt bound to publish; but in justice to Mr. RICHARDSON, we must observe that in his remarks nothing is to be found which can by any mode of reasoning be considered as a perversion of truth or honesty. He details facts, calls attention to the startling novelty, that the men were not allowed to use unprotected lights, but confined to the safety-lamp, and yet the employment of powder for blasting the coal was generally permitted. He then calls attention to the verbatim evidence given by Mr. DARLINGTON himself before parliamentary committees, and on other occasions, and from the premises assumes that had the mine been properly ventilated, and the use of gunpowder strictly prohibited, it is tolerably clear that, according to Mr. DARLINGTON's own theory, the accident would not have happened. Mr. RICHARDSON has for years ably and warmly advocated the cause of the working collier in our Journal, and we must in justice say that his communications are always illustrations of facts, personalities are ever avoided, and it is only the glaring anomalies, and clearly apparent faults in the law, which he stigmatises.

The coup-de-gr

is gradually developing itself in Mr. SQUIER's Honduras Railroad, which is incidentally noticed in our columns. The course runs from Puerto Vallarta, on the Atlantic side, to the Bay of Fonseca, on the south; its course runs between the meridians of 87° and 88° west long., a distance of 150 miles from north to south. The summit level is said to be at the village of Rancho Chiquito, at an elevation of 2800 ft. above the level of the sea, and the gradients are described as not exceeding 80 ft. in the mile. The project may vie with the existing routes, for it has the advantage of good harbours, in which respect the Tehuantepec, the Nicaragua, and the Panama routes are all three deficient. But it can never be a substitute for a canal, if ever that can be constructed; for the trans-shipment of merchandise could not be economically effected, and it is a question in our minds whether, in comparison with the shortness of the Panama Railroad, the saving of the assumed distance in the voyage will be a compensation for the extra charge of transit over 150 miles as against proportionate rates over 43 miles, the extent of the Panama Railroad. However, every competition of the kind must be in the public interest, for without it commerce would be at the mercy of any combination which might be established for the monopoly of transport. We shall probably in our next supply some information regarding another project of canal by the Atrato, which has in relation to it, at all events, some truthful evidence, that of Capt. FRIEND, which has been deemed worthy of a place in the *Transactions of the Royal Geographical Society*, and also other testimony, which merits attentive consideration.

The Truck System again occupies the attention of Parliament. It seems to be generally admitted that the last bill which passed the Legislature proved defective, and an animated discussion lately took place in the House of Commons on a new one now in progress. Some of the members voted upon the occasion to declaim upon the necessity of protecting the wage and helpless labourer against the unjust and avaricious employer, who supported the proposed measure, as merely establishing a principle which had been recognised for centuries, and as the only means of preventing workmen from being defrauded of a portion of their earnings. It was declared as an employer, that the truck system was an abomination which the strong arm of the law must put down, for the sake of the operative, but of the master. Other members defended the bill, as it did not propose, and was not calculated to interfere with, just rights and full enjoyment of capital, but merely to remedy glaring evils in the former Act, by which contracts for wages between the employer and the employed were made void, while as the law stood it was impossible to establish such contracts, and the provisions being made in the statute was, to a great extent, inoperative. It was further voted that the present measure did not involve any new principle, but entirely in conformity with the existing law, which had received the strict legislative sanction.

The opponents of the measure, on the other hand, insisted that it was in principle, unnecessary in practice, and would prove ineffectual. It was admitted that previous legislation had generally failed, and still it was proposed to pass a new measure, encumbered with fresh and still more stringent penalties, and likely to create a more numerous class of informers. Others objected to all interference by legislation between the labourer and employer, a policy declared to be injurious to both, and some deemed it wise to act on preconceived opinions without further enquiry. A critical view was started, that the evils, which all acknowledged, were farre so much as defects in the law as to the social condition of the people, and announced that the only remedy would be found in its amendment.

Mr. GEORGE GREY stated, that many complaints had been made to him in his official capacity when Secretary of State for the Home Department, of the various evasions, which caused great discontent in many districts; it having been alleged that defects existed in the present law, he had directed Mr. TREMENHEERE to enquire and report to him fully on the subject.

That gentleman had reported against the law as it now stood, and suggested improvements which are embodied in the present bill; and clause, however, went further than Mr. TREMENHEERE's recommendations—namely, prohibiting shops on the premises, in which provision (Sir GEORGE GREY) was not disposed to acquiesce. An amendment, for a select committee to enquire into the operation of the laws affecting the relations of masters and workmen, and to report whether any what amendments were requisite in those laws, was moved, and ultimately lost by a majority of 166 to 56. The bill was then read a second and ordered to be referred to a select committee.

The subject is one of vast moment to the manufacturing and opera-

gations, and to none, perhaps, so much as to those engaged in mining

operations, we are happy that an opportunity is thus afforded of taking

the sense of the country on the subject; and we hope to see the most in-

teresting and most impartial testimony from the many and varied interests

involved, calmly submitted to the consideration of this select committee.

The case under the Joint-Stock Companies' Acts has been the subject of discussion and adjudication before the House of Lords, on an appeal brought by Mr. ROBERT HALL TERRELL v. MR. JAMES HUTTON, the manager in "Re the Independent Life Assurance Company" and the winding-up Acts. The company had been established in 1847, and the respondent had acted as solicitor, and procured its provisional registration, in accordance with the provisions of the 7th and 8th Vic., "An Act for Registration, Incorporation, and Regulation of Joint-Stock Companies" and he was registered as the solicitor of the company. By resolution of the directors it was provided, amongst other things, that no officer of the company should be personally responsible for the salaries of the officers of the company, and that no officer should be entitled to payment for his services until a sufficient sum should be obtained by the funds of the company for the purpose; but the solicitor was also, by his resolution, directed to insert advertisements in the public papers, and to do acts in the way of his professional duty. By other resolutions, Mr. Hall had been directed to make payments, and his claim was subsequently acknowledged; the solicitor's bill, including counsels' fees, being duly treated amongst the liabilities of the company. The appeal was further prepared the registered deed, and an advance of 60/- was made to him to cover the stamp for it, and funds were subsequently paid under the Deed of Settlement. The complete registration of the company took place on the 19th of Oct., 1848, and on the 27th of Dec., 1848, the appellant delivered his bill of charges, claiming a balance of 13s. 6d., after crediting the sum paid on account. On the 26th January, 1850, an order was made for winding up the company in the form of the appellant up to the time of that order continuing solicitor of the company, and the case was referred to Master TINNEY, by whom respondent was appointed official manager. On the 9th of April, 1850, the respondent furnished him with the bill, then, with additional charges, amounting altogether to 645/-, which the Master allowed only as a sum with liberty for the appellant to bring an action at law for the balance. This decision was subsequently affirmed by Vice-Chancellor BAKER, from whose adjudication the present appeal was brought directly to the House of Lords.

It was now argued, on the part of the appellant, that he was entitled to his bill of charges without the necessity of having recourse to an action at law, because he had been duly appointed, and had acted as solicitor of the company from its formation to its dissolution. It was, on the other hand, urged on the part of the respondent, that the order of the court did not affect the legal right of the appellant, and was in conformity with the proper course under the Winding-up Acts, on an application to prove a debt where the legal liability, or the amount, was disputed.

Lord CHANCELLOR, in moving the judgment of the House, with the concurrence of Lords BROUGHAM and ST. LEONARD's, declared—

"That company ought not to be bound to every detail in the appellant's bill;

it was established that the bill was constituted of items of expenses incurred after the formation of the company, and that they were proper necessary items, and rightly incident to the establishment of the company; it would be unjust not to allow that such materials constituted a debt.

The Winding-up Acts had been passed to facilitate the payment of debts; and in the course of winding up the affairs of a company, one of the essential points to be ascertained was their amount. The Master

were bound to contribute towards payment of the amount. By the provisions in the Acts, parties were prohibited from recovering debts in any action at law, until they should have first established their right to claim before the Master. The object of this very salutary

law was, that the Master might acquire a knowledge of the amount of debts, so as to enable him to give proper directions for winding up the affairs of the company, having a due regard to the debts to be paid.

The question in the present case was, whether the claim ought

to be admitted, subject to the amount being duly ascertained. As it was impossible to doubt but that the appellant had been employed and had acted as solicitor, and was entitled to remuneration, the order of the House would be—That the case should be referred back to the Court below; that the appellant should be admitted as a creditor for the business done by him since the establishment of the company, and for all expenses necessarily incurred by him in its formation, with directions that the bills should be taxed by the proper officer; and, moreover, that the appellant must go beyond taxation, and establish the items he claims to be proper items."

In another part of our Journal will be found a short report of a cause, MITCHELL and others v. RICHARDS and others, tried at the Exeter Assizes, which shows how necessary it is for parties to investigate matters before entering into mining adventures. In this case, Mr. JAMES RICHARDS, the captain of the Devon Great Consols, represented a scat to be of great value, and induced a gentleman in London to pay a large premium for that which has turned out to be perfectly worthless. It appeared on the trial that RICHARDS was engaged by MITCHELL privately to dispose of the scat; and RICHARDS's position at the Devon Great Consols, and agreeing himself to take part, gave the parties confidence; but no sooner was the true state of things discovered, than RICHARDS places everything in the hands of the plaintiffs, and endeavours to make the party he had so misinformed pay a large amount for that which turns out a total failure. Fortunately, the law in such cases is in favour of the injured party. One of the defendants succeeded against the plaintiffs on the trial, and there are several legal points reserved in favour of the other defendants.

The question—Is coal to be found at a workable depth near London?—was propounded and animadverted upon by "A Newcastle Pitman," in the *Mining Journal* of the 4th of February last, is of undoubted importance, and worthy the serious consideration of the geologist and persons possessing landed property in the secondary strata, at points nearer London than the present most southern known coal deposits. In subsequent Numbers we have inserted several communications on the subject, the writers of each agreeing that the question is really a national one, and that more than a probability exists, that considerably southward of the Warwickshire coal-field boring might lead to important discoveries. In our columns of the 18th of February our esteemed correspondent, Mr. JOSEPH HOLDWORTH, entered on the subject, with that lucidity of style and argumentative power which always mark his writings: he shows, that although the secondary and tertiary deposits over the coal measures are estimated at 8600 feet in thickness, there is to be taken into account the vast inequalities of the primary and transition rocks, which might, on occasions, serve to bring the coal within the reach of man. Also, the stupendous dislocations which frequently occur, bringing, in some cases, the carboniferous strata almost to the surface of the lias.

Perhaps there is no circumstances connected with the geology of the carboniferous measures more important to this question than the fact that the coal-seams of the basin of the Sambre, or Hainault, are covered by the chalk formation, from 45 to 180 or 200 ft. in thickness. In one of the shafts of the Grand Hornu, they have penetrated through 210 ft. of overlying chalk, the lower 20 ft. containing layers of flint. Between these and the ordinary coal measures there appears only a bed of 4 ft. or 5 ft. of blue shale, or clay. In many cases, particularly on the French portion of the coal-basin, this overlying chalk has been proved to a thickness of 400 ft., and the whole field possesses great geological interest. It is, as far as geological deductions can enable us to judge, almost a certainty that the outcrop of the great chalk formation of England having traversed this island in a north-east direction, leaves our coast on the shores of Norfolk and Lincolnshire, passes beneath the German Ocean, and is again found in Belgium and France: we cannot help thinking, therefore, that it would be worthy of some trouble and expense to make a trial here, to ascertain whether some of the features so singularly developed in the Belgian strata did or did not rule on this side of the Channel. To carry this into effect, it would not be advisable, we think, in the first instance to come too near London, where the tertiary strata are many hundreds of feet thick; a trial might first be made on the outcrop of the upper oolite formation, in the neighbourhood of Aylesbury, in Buckinghamshire, being about midway between the southern point of the Warwickshire coal-field and the metropolis. Should success crown such an effort, by the discovery of the coal measures, it would stimulate to still more extended researches further south, and at length settle the question—can coal be found at a workable depth near London?

The speculative character of all mining operations, and the uncertainty as to the results, form only a portion of the difficulties and drawbacks which pertain to such adventures: lords' dues, too often oppressive to young mines, not only not yielding a profit, but which are a continual cost to the shareholder, the income tax, and the poor's rate, form some of the burdens which press so heavily on mines, particularly those in the early stage of development, and others in a transition state; and as these two latter imposts have of late years produced much ground of complaint, appear not to be very generally understood, and as we have received several communications on the subject we propose to make a few remarks, and to give such information as our experience enables us to do. Some of our correspondents erroneously consider that the income tax on a mining company working several mines, situate in different counties, would be levied on the produce of each in its own particular district. Such an idea is not founded on practice, and the point is one of very considerable importance, especially to Ireland, and one which should be understood by all mining companies there, some of which bid fair to become important undertakings, now that the tax extends to that country, and is assimilated in its mode of levy and collection with the practice in England. It is tolerably clear that the nature of this charge is a tax upon real income, surplus, or profit, after deducting every current charge; and the usual practice is, both with a company working only a single mine, or with such a one as the Mining Company of Ireland, having various mines of metallic mineral and collieries in different counties, for the collector to take the statement made at the periodical meetings—whether bi-monthly, quarterly, or half-yearly, as the case may be—as correct. He then does not levy on the balance of profit made, the surplus of which may be all engulphed before the next meeting in unforeseen expenses and casualties, but simply on the entire amount of the dividend paid, which, of course, forms the only income of the shareholders, and on which alone the tax can legally be demanded. The collectors have authority to examine all books and documents to enlighten them, should they suspect any underhanded dealing or false entries, and are empowered to summon parties interested before a magistrate, and have them sworn as to the truth of any evidence they may be called upon to give.

Much ill-feeling has arisen in some districts both in England and Ireland, as to the mode of rating mines to the poor's rate, and we understand that the Liskeard Board of Poor Law Guardians are anxious to ease all classes of the rate-paying population at the expense of the miners, and that they have adopted a petition to Parliament, praying that they may be empowered to rate mines to the poor rate upon the amount of dues, whether payable in money or in kind, a mode of calculation which comes to nothing less than a tax on capital, as we shall show.

It is no exaggeration to state that three-fourths of our mines in actual operation are not paying cost, although they are raising ores and paying lords' dues, and the effect of such a power, which if once granted would soon spread to every mining district, would be to paralyse mineral enterprise, and probably bring to a stand still one-half the non-dividend mines, although numerous are those among them which hold out great promise. Indeed, such an authority would defeat itself, for as it would deter capitalists from prosecuting such work, labourers would be thrown out of employment, and the guardians would find to their cost a vast accession of applicants for relief, without the corresponding extent of resources whereby to satisfy their wants. Another plan, hardly less objectionable, has been proposed, that of rating the profits paid to the shareholders in the shape of dividends; but we contend it is impossible, in such uncertain, changeable, and perishable property as mines, to estimate profits on which the rate could justly be made, at least until the whole capital and interest had been paid back to the shareholders; until which the only rate should be that which is paid by the freeholder or his lessee for the surface, valued as agricultural property. Lords' dues are deemed clear profits to those who receive them; and all mines in Coenwall have, therefore, been charged the rate thereon, with some few exceptions, arising from a new custom, originated about 12 years ago, under which it was called a free rental, payable to the lord; and the mine thereby became not liable to be rated. It is said that the object of the petition of the Liskeard guardians is to obviate this exclusion of one or two to the prejudice of the many; but we believe and hope that the Legislature will never consent

to so iniquitous a power being granted as that sought by them; but it would be well to explicitly define the mode of levying these taxes and mode of collection, that there might not be two opinions on the subject.

The case of *COURTIS v. JOHNSON*, the facts of which had been previously before our readers, has been again tried at the Exeter Assizes, before Mr. Justice ERLE and a special jury. It was an action to recover the sum of 94/- for goods sold and delivered, being necessaries supplied for the working of a mine called the West Downs. The mine was conducted on the Cost-book Principle; the defendant was sought to be charged as a shareholder, and he resisted the demand, on the ground that he was not a shareholder at the time the goods were supplied. Another tradesman had brought a similar action about two years ago against the same defendant, in which the plaintiff had failed, but the present plaintiff had recovered in this case on the first trial, before the late Mr. Justice TALFOURD, at the last assizes. The Court of Exchequer had, however, set aside that verdict, on the ground of misdirection by the learned judge in point of law; and the case having accordingly come down for a new investigation, the delivery of the goods was now proved, and also that the defendant had been a shareholder. The defendant was then examined, and he proved that he had transferred the shares to a Mr. DIAMOND, the purser of the mine, by parole, there being no transfer in writing.

The evidence raised an important question, and it was argued on the part of the plaintiff that the defendant still continued a shareholder, and that it was not competent for him to divest himself of that character except by a written transfer of his shares, or by distinct notice given to every shareholder. The learned judge, however, decided that a legal transfer of shares in a mine such as this, carried on under the Cost-book Principle, might be made without writing. He laid it down as law that, as the defendant had come into the concern without any writing, he might go out of it in the same manner; and he further decided that notice to every shareholder was not necessary, as no notice had been given to them at the time he entered into it. The jury accordingly found for the defendant. This decision, which it is presumed, was in accordance with the view of the law taken by the Court of Exchequer, is of great importance. It may, perhaps, be inferred, that this was a cost-book mine, governed by custom, and not by written rules, and it was probably decided on the principle that in customary cost-book mines neither a written transfer nor a previous notice was required. If, however, in a cost-book mine, governed by written rules, either a written transfer or previous notice was required by the rules, we presume the compliance would be held essential to the discharge of liability.

As we are daily approaching nearer to the advent of throwing open to the admiration of the world the gorgeous wonders of the Crystal Palace at Sydenham,—to the day when will be displayed to the examination of gazing thousands the most extraordinary efforts of human art, not only in the production of the necessities, comforts, and luxuries of the present period, but in the representation of restored monsters of a pre-Adamite creation, some few remarks at this juncture may not be ill-timed. In the *Mining Journal* of the 4th inst., we inserted a report of the last meeting of the shareholders, at which the proposition of the directors for raising an additional sum of 250,000/- was cheerfully responded to, although Mr. LAING, M.P., the chairman, stated it was probable a like sum would be required before the undertaking could be completed in all its details. The amount already expended is 680,000/- we may thus fairly estimate that by the time of its completion an outlay will have been incurred of something like 1,250,000/- sterling, a sum which, at 5 per cent. per annum, will require an annual income of 62,500/- in addition to the current expenses, cost of repairs, &c. From only a casual observation, it would appear almost unreasonable to expect it possible to raise such a sum, year after year, even from the magnificent resources of such an establishment; but it must be remembered there are other sources of income besides those arising from the exhibition. Advantageous arrangements have already been made with the directors of the Brighton Railway, by which they have adopted the Crystal Palace line for their west end traffic, for a payment of 8000/- per annum; there will be let to exhibitors no less than 150,000 square feet of surface, which will be richly ornamented, and form various courts, surrounded by parterres and promenades, which promises fairly to produce a large revenue, as applications have now been made far exceeding the space appropriated. Again, the company have obtained a lease of Dulwich Wood for 84 years, which, as building sites, will produce a large profit rental; and we feel confident that the large interest held by the directors, combined with their known business-like habits and spirited enterprise, will induce them to leave no means unadopted to promote the success and permanency of this great undertaking.

The fact, however, must never be lost sight of, that notwithstanding the rapid progress of science, and the growing desire to obtain information connected with its mysteries and the arts, the public is a capricious animal, requiring constant attention, and continuous enticement, by catering to its appetite for novelty and change. We have no doubt the directors will find it necessary, at least every season, to produce some alluring novelty, which, in connection with the standard wonders and beauties of the place, will keep alive the public interest; and we sincerely trust no further postponement of the day of opening from the 24th of May next will for a moment be entertained: the failure of the Exhibition at New York, from which has resulted a loss of \$125,000, is solely attributed to the fact, that on the faith of the directors' promises the public expected it to open on the 1st of May, 1853, but which event did not take place until the 14th of July, and then in a very incomplete state. We are glad, however, to find, that from the present state of public feeling there appears no fear for the future. The directors have received the most gratifying assurances from all parts of the Union, as to the benefits which the enterprise has already, and is likely in future, rendered permanent, to confer on the art and skill of the country. These establishments are new features in society, peculiar to the present age: London, Paris, and New York have now each their art exhibition, all of which we have little doubt will be well supported by an enlightened and progressive public. Our Sydenham Palace far outvies either of the others in magnificence and extent, and has involved a corresponding, and we may say, enormous outlay; but we trust by continued exertion, and spirited management, a return will be secured equal to the extent of the undertaking, while we feel convinced the enterprise is eminently calculated to advance the best interests of the public.

The numerous facilities now offered by the establishment of schools under the fostering care and support of the Government for instruction in science and the arts, are not the least of the advantages held out to the rising generation, as the result of the great industrial progress made during the present century. Among these is the Department of Practical Art and Science, at the Central School, Marlborough House, Pall Mall, consisting of a normal school for training teachers and general students, and of special classes for technical instruction. The courses of instruction are intended to impart systematically a knowledge of the scientific principles of art, especially in relation to the useful purposes of life. A limited application of these principles is demonstrated, with the view of preparing students to enter upon the future practice of decorative art in manufactorys and workshops, either as masters, overseers, or skilled workmen. At the same time, instruction is afforded to all who may desire to pursue such studies, without reference to any special branch of industry. Special courses are arranged, in order to train persons to become masters of schools of art, and to enable schoolmasters of parochial and other schools to teach elementary drawing as part of general education. The instruction is carried on daily, except Saturdays, at moderate fees; and students may matriculate for a period of three years, upon paying 20/- on entrance, or three annual payments of 10/- They are entitled to attend all public and class lectures, the general and technical courses, to receive personal instruction, to practice in the school at all times, have access to the museum and library, and at the end of the session may pass an examination, and have the privilege of competing for scholarships, varying in value from 10/- to 30/- per annum. A register of the students' attendances is kept, which may be consulted by parents and guardians. Mr. RICHARD REDGRAVE, R.A., is the art superintendent.

Connected with the School of Arts are four kinds of beneficial studentships, granted to pupils, enabling them to fill various official positions in local schools of art, and those in the Central School, Marlborough House. They consist of prize studentships, pupil teacherships, prize scholarships, and central scholarships, entitling the holders to certain advantages in the schools, or the receipt of allowances from 10/- to 30/- per annum. There is a special class for instruction in mechanical and engineering drawing, under the superintendence of Mr. WILLIAM BINNS, formerly Professor of Practical Mechanics at the College for Civil Engineers; the system pur-

sued being to commence with the fundamental principles of projection, divested as much as possible of technicalities, theories, and demonstrations, thus meeting the wants of the operative smith, engineer, carpenter, and builder, for whose benefit this class is specially intended; and it is believed that, under the system pursued, the attendance during two sessions will enable them not only thoroughly to understand a drawing when laid before them to work from, but to get out plans, elevations, and sections of machinery, and to lay down in a methodic and systematic manner any ideas of improvement which may occur to them, and generally to ascertain whether such improvements can be carried out in practice. Another special class is held, under the same instructor, for demonstrating the principles of orthographic projection as applied to mechanical, engineering, and architectural drawing; to enable the student to form a just conception of solids and other figures, as they appear to the eye when viewed in different positions. Elementary drawing also forms a part of the general education of the school, which appears to be conducted on a system formed from the best points of detail in the experience obtained at our large public schools, calculated to advance the knowledge and the interest of the pupils, and to become a great public advantage.

A meeting of scripholders in the WEST GRANADA (OR VERAGUAS) GOLD MINING COMPANY, convened by Mr. GEDALLA, was held on Thursday, and the question must arise amongst those who attended whether, in this instance, the scripholders have done their duty. All mining is speculative, and those who embark in such undertakings should take that into consideration. The temper with which the proceedings were generally conducted must act as a lesson to those who attempted to condemn the board of directors, whilst not the slightest charge could be maintained, either against them or the vendor. It is true, as Captain CHARRETIE stated, one error had been committed, and from that all their difficulties arose; but even in this case they had done all that human foresight could do. We know that in mining the success mainly depends on the integrity of the superintendent, and before that officer was appointed diligent enquiry was made, and high testimonials produced; but the result, notwithstanding, was the expenditure of a large amount of capital, without the slightest return. From the formation of this company, what has been the conduct of the vendor and directors? The latter have worked hard for two years for the interest of the shareholders, without any remuneration; they hold a large number of shares, upon which they have fully paid, and which might have been disposed of at a premium, in addition to advancing from 4000/- to 5000/- to keep the works going; and on asking for a further capital of 20,000/-, propose to take amongst themselves 13,000/-, of which it was stated that the vendor would put down 1000/-, although it was conceded that out of the money already received very little had found its way into his pocket, it having been expended in claims on the mine, in order that the property might pass free to the company.

It was admitted by all that the company is really in possession of a valuable property, only requiring additional capital to work it profitably. How have the scripholders attended to their own interests? A committee was appointed, at a meeting in February last, to confer with the directors, and suggest the best means to be adopted for the general benefit. Although the books and accounts have always been freely open to the inspection of all, whether scripholders or shareholders, registered or unregistered, these parties now become alarmed at the prospect of dissolution, and suggest another committee. Mr. CLAY, who was one of the committee previously appointed, stated that although two or three appointments were made with the directors, which they faithfully attended, not one of his fellow-commissioners supported him. The information he obtained enabled him emphatically to declare to the meeting that he believed they were in possession of a most valuable property, and we would recommend the scripholders to take the advice of Mr. CLAY, and go to the meeting on Wednesday prepared to act. If they can find a more efficient board, let them appoint one, or let them add to the present number, Captain CHARRETIE, on behalf of the directors, having pledged himself to meet the wishes of the shareholders, and produced a similar authority from the vendor, who appears throughout to have acted in a most praiseworthy manner.

The directors of the LIGUANE AND GENERAL MINING COMPANY OF JAMAICA have at length come, or rather have been driven, to the determination of winding-up the company's affairs—a course of action which they would have been justified in recommending, and which, in justice to their own position, as well as to the shareholders, they ought to have adopted long since. The credulity of some men, however, and the pertinacity with which they cling to their opinions, is most remarkable; and never, perhaps, has there been an instance more strikingly characteristic of blindness and folly on the one side, and of absolute deception on the other, than has been exhibited in the career of this company. We have no wish to reprobate the directors with undue severity. Any man—even the chairman of a board of directors—may err. There is but little sympathy, however, for men of intelligence who suffer themselves to be misled with impunity, and who take upon their shoulders the responsible duty of protecting the interests of others. So far as honesty of purpose and integrity of character are concerned, the confidence of the shareholders in the London management was not, we believe, misplaced, but we cannot recognise in their proceedings those essential elements of discernment and business-like habits, so necessary to the success of commercial enterprise; for it is not until the oil which kept the machinery in motion is nearly exhausted, it is not until the capital is expended—squandered away, according to their own showing, their own admission, upon a mere shadow—that the shareholders are acquainted with the stern and inflexible truth, that they have either been systematically deceived, or grossly misled. Mortifying, indeed, must be the position of any body of conscientious men in such a position; and what a lesson does it teach those who are too apt to confide in the statements of parties, who would heedlessly lead them into speculations, and who suffer their eyes to be dazzled by a mere Will-o'-the-Wisp. In something like 12 months has a sum of upwards of 21,000/- been exhausted upon chimera—upon the loose and unsupported statements of one or two interested parties; and this, notwithstanding the warning voice of Colonel BLAKE, who, so far back as March, 1853, at a meeting of shareholders, told the directors that the Friendship Mine offered inexhaustible material for censure, and that money had been squandered there without the slightest reason. Again, in August last, Mr. ISAACS, who stated that he well knew the Island of Jamaica, having lived there nearly 40 years of his life, expressed an opinion that in Jamaica there was no existence of copper in abundance. Still the directors go on, and at a special meeting in November the chairman informed the shareholders of the discovery of a very rich lode of gossan at River Head. The statement was doubted by one sagacious shareholder, who entreated the directors to proceed with caution, and endeavour to ascertain if they were really in possession of a mine, of which he entertained considerable doubt. To the directors, however, who were about raising a further sum for the development of the property, everything was clear, and one of the board did not hesitate to assert that he had seen "with his own eyes" remarkably fine indications. Fortunately, the directors had no power to make a call, and it was proposed that a subscription should be raised of 2s. per share. This last struggle, however, has not had the desired effect, notwithstanding the shareholders were told, with a great deal of legal importance, that if the money was not provided the mine must be abandoned, and other parties would reap the rich rewards that were in store. The shareholders thought they had already suffered quite enough, and refused to respond to the dictates of their guardians. Then comes the truth—the bubble which had been so long wafted by the gentle breezes of King's Arms-yard suddenly explodes, and we find the directors in sad tribulation, hushing their misfortunes in a strain of lamentation, which none but the really penitent can express. We repeat that we have no desire to throw the slightest imputation upon the character of the directors, but their want of foresight and feeble arrangements are highly censurable. What was there to prevent them obtaining monthly reports? The absence of such communications was in itself sufficient to create a doubt in the mind of any man acquainted with mining operations, and prompt measures ought to have been taken to ascertain the cause of such silence. It was fraught with suspicion, and the directors were bound to have that suspicion cleared up before they ventured to run the shareholders deeper into debt. The plea which they put forth in justification of their management is uncharitable and inconsistent; for Captain LEAN, on whom they would throw the onus (and whose lips are for ever closed), stated in one of his early reports, that that which had been described as an excellent and regular copper lode did not contain one particle of ore, nor could he find a regular lode, but a mere vein of dookan and carbonate of lime.

The honest and ungarnished reports of Captains BENNETTS and MAYNARD, who were, at the urgent request of the shareholders at the special general meeting in November last, employed to make a survey of the pro-

perty, at once set the question at rest; and the shareholders and the public cannot but feel deeply indebted to those gentlemen for their able and impartial reports. Although the explorations had extended nearly 500 fathoms, there has not been half a hundredweight of copper ore taken out; neither, according to the statement of Captain MAYNARD, was there one pound in sight that could be taken out; and as for the reported well-defined lode of 30 feet wide, it never had any existence whatever. As a last resource, we apprehend, some of the best specimens of the gossan were submitted to PERKINS's immaculate amalgamator, but, alas! produced *nil*.

By the failure of this company, a gloom has been cast over other mining enterprises in Jamaica; but we feel it to be due to those companies to express our highest approbation of the judicious course which the majority have adopted, and we sincerely hope they may yet realise the results which are anticipated. It is, however, impossible to dismiss the subject without expressing our sincere regret for the painful disappointment which must be felt by the unfortunate shareholders in the company under notice.

Another instance of what we cannot avoid considering, and have repeatedly characterised as, the defective state of the law in respect of homicides traceable to the mismanagement of collieries, has occurred at the Glamorganshire Assizes. DAVID SIMS was indicted at common law for the manslaughter of DAVID THOMAS, who lost his life on the 16th of September last by the explosion at the Letty Shenkin coal mines, in which two persons were killed, and fifteen injured. The prisoner was trustee of the colliery, and on the part of the prosecution it was contended that he was responsible for its management; either that it was his duty to have adopted himself proper means for the ventilation of the colliery, or to have provided a proper person for that purpose. It was admitted, as a singular circumstance, that several lives had been saved by a certain door being left open, which had enabled the choke-damp, or carbonic acid gas, to escape, although it had been left so through negligence. The counsel for the Crown, in opening the case, expressed his regret that the Act recently passed did not contain some stringent enactments, with the view of rendering proprietors and managers of collieries responsible for the fearful catastrophes which had taken place. The statute law only directed that immediate information of the accident should be given, and contained no further provisions, the Legislature probably considering the common law of the country sufficient. Great changes had, however, he urged, taken place: operations of this nature were now carried on by extensive firms and large companies, and in this altered state of society it became highly important that persons entrusted with the management of such establishments should be responsible for their misfeasance, as well as neglect. It was often difficult to fix on the person whose immediate act was the cause of death; and if the proprietor or manager, who had the entire control, were not liable, the lives of hundreds might be sacrificed, and still no person responsible.

The charges against the prisoner were, either that the accident had occurred through his own inefficiency, or through his neglect in not providing an efficient person; but the first failed, as it appeared in evidence that he did not interfere underground. The main charge, then, resolved itself into this—that the prisoner had appointed an incompetent person; whereas it appeared in evidence that he had not appointed any person, the party in charge having been appointed by others. The learned Judge was, therefore, of opinion, that although the prisoner might be civilly responsible, the circumstances were not such as to render him criminally so. He laid down the law, that generally speaking a man could only be held criminally responsible for his own personal negligence; he would be civilly responsible for the acts of his agents or servants. Extreme cases might, however, occur, in which a person might be criminally chargeable for the acts or incapacity of another, such as committing a railway-engine to a person who had no experience; but there was no evidence of such extreme culpability in this case. The prisoner was accordingly acquitted.

It is manifestly quite idle to seek to apply the common law of manslaughter, as laid down by our ancestors, to the casualties that are daily occurring in mines and on railways. We have repeatedly urged that there will be no security for human life until the Legislature shall first empower some public body, of acknowledged authority and competency, to frame strict rules and regulations; shall next give them, when duly promulgated, the force of statutory enactments; and shall then declare the neglect or violation of them criminal and highly penal offences.

A case relating to the law of patents has been decided in the Exchequer Chamber, which, although not establishing any new principle, tends to confirm the doctrine which we have repeatedly laid before our readers. An action had been brought by the plaintiff, Mr. BUSH, against the defendants, Sir JOHN FOX and others, for an infringement of a patent obtained in the 5th year of HER MAJESTY's reign, for "Improvements in the means of, and in the apparatus for building and working under water." The specification then described a caisson, constructed of cast-iron plates, and the compartments into which the interior was divided, the valves, manholes, and other apparatus, by which the operation of working under water was to be effected. The patentee claimed to be the inventor of a mode of constructing the interior of a caisson in such a manner that the workmen might be supplied with compressed air, and might thereby be enabled to raise the materials that were excavated, and construct foundations and other buildings under water.

It appeared that the plaintiff had used his caisson on the Goodwin Sands, and the method of sinking it was thus described—It was floated into the position where it was sunk, when in sinking the water had forced out the air, it is filled to prevent its rising. The top valve is thus closed, and air forced in so as to drive back the water, or to throw it up a cylinder at the side like a syphon, an operation well understood in the use of the diving-bell. When sunk, and clear of water, the work of excavation begins, the substance raised is passed from the lower to the upper chambers, and the work goes on until the caisson has sunk to the depth required, and a permanent foundation is reached, of which it becomes part, and the division between the upper and lower chamber being removed, it becomes filled with concrete and masonry. The alleged infringement was, that the defendants had used, in making the foundations of Rochester-bridge, cylinders kept clear of water during sinking by compressed air. They justified the use of them by relying upon a patent obtained by the Earl of DUNNEDAL, when Lord COCHRANE, enrolled on the 20th of April, 1831, the specification of which stated it to be "An apparatus to facilitate excavating, sinking, and mining." Lord COCHRANE's invention, and what the defendants were doing at Rochester-bridge were precisely similar, except that his was worked on land, and their application of it was in this respect different, that it was worked in the water; but, it was contended that there was nothing in the specification to show that his invention was to be applied or used only on land. It appeared in evidence that on the Goodwin Sands there are 35 ft. of sand above the chalk, and 18 ft. of water above the sand, and that when the water was passed, and the sand was worked, the process was the same in both inventions. On this state of facts, the LORD CHIEF BARON directed the jury, that if they believed the evidence, the plaintiff's invention was not one of any manner of new manufacture, and that his action could not be maintained. The Court of Exchequer having sustained that view, the present writ of error was brought, but the judges unanimously held, that there was not in this instance any novelty of construction, that the invention was not new, that the caissons were the same in all material particulars, that in effect there was not any substantial difference, that the LORD CHIEF BARON was right, and the judgment of the Court of Exchequer was accordingly affirmed.

The case in the Master of the Rolls' Court, in the matter of the JOINT STOCK COMPANIES' WINDING-UP ACTS, and the CAMERON'S COALBROOK STEAM COAL AND SWANSEA AND LOUGHOR RAILWAY COMPANY, conveys an instructive lesson alike to directors and shareholders in joint-stock companies. It will be remembered that about five years since some 60 of the most influential shareholders in this company, which was in a state of insolvency, with heavy liabilities, were anxious to retire in a body, to rid themselves of further liability. As the consent of the directors was necessary to allow of transfers being made, a negotiation was opened for this purpose, which resulted in a sum of 9000/- being paid—two of the CAMERON family, who were creditors and directors, getting the lion's share; and transfers were allowed to be made of the shares to two parties, as trustees for the company. The utmost precaution was taken to have the transaction clothed with all legal formalities, and counsel learned in the law engaged to draw the deeds necessary to bind the contract. As the shares thus transferred virtually ceased to be represented, it followed, as a matter of course, that the remaining shareholders, whose interests had been vitally dealt with by those parties, were loud in their complaints. In course of time the company's affairs were ordered to be investigated

under the Winding-up Act, as the shareholders left on the register were being sued for the debts of the company. When the parties got into the Master's Office a desperate struggle took place as to the appointment of an official manager. The retiring shareholders felt if they could get a party they recommended, most likely his views of the transaction would be influenced, and so the onus was thrown on the remaining shareholders of placing them on the list. The shareholders who had been left on the register, and liable to some 30,000/- debts, felt, unless they got an independent party as official manager (as only some six or eight were capable of paying), they would be saddled with the 30,000/- We believe sufficient was shown to the Master as to what the real struggle was likely to be to induce him to fix on a gentleman not proposed, and, therefore, not likely to be influenced by any party, and he accordingly nominated Mr. TURNER. The official manager, on investigating the transaction as regarded the 60 seceding shareholders, treated the transaction as void, and placed the whole of them on the list of contributaries. A tedious and expensive investigation in the Master's Office by the seceders, in showing cause against their being on the list, then ensued, but in the result, after the whole facts had come out in evidence, the Master decided they were rightly placed on the list, and held the alleged transfer of shares void and illegal. Against this decision the seceding shareholders appealed, and the result is stated in the judgment of the MASTER OF THE ROLLS. The Master of the ROLLS, from the statement of the case as put forth by the appellants and without calling on the other side, proceeded to give judgment, and enunciated principles so in accordance with justice and equity, that we think few will be found to controvert any part of his judgment. He recited on first principles, and laid it down as the governing rule in equity, that when a trust is created that trust shall be fairly exercised; and it is not in the power either of directors, creditors, or shareholders, to do any act whereby one section may be injured or damaged in the slightest degree, but that the rights and interests of all parties to a contract shall be legally and equitably adjusted; and that however much a transaction may be hedged around by wordy deeds and documents in law, they become legal instruments, to last only until the good sense of equity sweeps them away.

#### NOTES ON GOLD SURVEYS IN WALES—No. V.

BY JOHN CALVERT, ESQ.

Among the interesting questions of the day are those with regard to the richness of gold ores, and the paying per centage. There is a great demand for very rich ores, and I have numerous commissions on behalf of clients, who are willing to purchase the lease or freehold of property containing ore with a per centage of several ounces of gold to the ton, and showing the metal thickly disseminated. Many expect to get gold ore with as good a yield as those of copper or lead, so vague are the prevalent ideas, for few understand that the gold ore more nearly approaches to the silver-lead ore in its small per centage. Much of this feeling has been created, and, indeed, much mischief done, by the indiscriminate publication of large returns from gold machines and gold assays. If these results were anything like the truth, then this country would be, contrary to my expectations, the richest gold country in the world. California and Australia, with the benefit of the diggings to boot, would be nothing to a country which could furnish millions of tons, yielding from 20 to 30 ozs. per ton. If we get a few very rich lodes, it is as much as in reason we can expect on the evidence of science, as founded on observation of the laws of nature; for, after all, with whatever magic the popular imagination may invest gold, the production of that metal is founded on the same general laws as that of other metals, and we cannot expect anything in the case of gold beyond the influence of these governing laws. In the determination and application of these laws a thorough knowledge of the subject is required, and no empirical acquaintance with other metals will be necessary, but we shall be safe in ascertaining certain limits within which the elements of truth are to be sought.

Thus, on one hand there is nothing in the laws of nature to prevent the dissemination of gold in the suitable formations of these islands, they being favourable, and not antagonistic to the expectation of the metal; but, on the other hand, there is nothing to countenance the notion that gold will be found under anomalous conditions. The want of careful inquiry and scientific investigation may leave us unacquainted with the exact extent and the name of each auriferous locality; but we must not jump to the conclusion that we are abundantly favoured with very rich gold ores all over the country, than with the unreasoning assertion that there are no workable gold ores at all.

There is very mistaken idea that the wealth of mining is dependent on very rich ores, but any general experience, or, what is better, a reference to facts—as, for instance, to Mr. J. Y. Watson's valuable treatise, on the Progress of Mining in 1853—will prove that the largest results are obtained from very poor ores, according to the nature of the metal; copper, for example, being found in a higher per centage than silver, or silver from gold. Thus Mr. Watson states the average produce of copper in 1853 as varying between 6 $\frac{1}{2}$ , 5 $\frac{1}{2}$ , 6 $\frac{1}{2}$ , 6 $\frac{1}{2}$ , 7 $\frac{1}{2}$ , and 8 $\frac{1}{2}$ . The return of silver from lead in 1852 he states at 35 ozs. per ton in Cornwall, though Devonshire yielded 40 ozs. per ton. From such limited averages the value of copper raised in the last year returned as 1,124,561/-, of lead 1,200,000/-, and of silver 205,080/- The average yield of the ores of iron, a metal very extensively diffused, is notoriously small, and in our greatest iron districts it is found useful to import small quantities of rich ores to make up the average. The gold ores, which are most extensively worked, form no exception to the general mining law. The Brazilian ores produce 8 dwt. 15 grs., 7 dwt. 20 grs., 9 dwt. 4 grs., 19 grs. per ton, on average. The gold rocks are commonly on the surface, limited in extent, open to the operations of rude labour, readily exhaustible, and, in many cases, without one atom of gold below, which would justify deep workings, or the outlay of capital. There are, nevertheless, some exceedingly good operations for the capitalist in working gold quartz under judicious guidance, and the gold produce of California does yield a very considerable proportion of the gold of that country. So far as English capitalists, however, have been concerned, I believe as yet the chief benefit from California gold quartz has been in the sale of specimens, which have been represented as the produce of Australia, Wales, or Cornwall, and it behoves the investor to be on the look out against fraudulent specimens, represented as being obtained from home mines.

It is, nevertheless, perfectly true that there are very rich gold specimens as there are Lake Superior Mines and Burra Burra; and I have seen some gold rocks of the highest quality in great abundance, but I no more look upon these as presenting the means for regular mining operations, than I do upon the gold fields and placers. These gold rocks are commonly on the surface, limited in extent, open to the operations of rude labour, readily exhaustible, and, in many cases, without one atom of gold below, which would justify deep workings, or the outlay of capital. There are, nevertheless, some exceedingly good operations for the capitalist in working gold quartz under judicious guidance, and the gold produce of California does yield a very considerable proportion of the gold of that country. So far as English capitalists, however, have been concerned, I believe as yet the chief benefit from California gold quartz has been in the sale of specimens, which have been represented as the produce of Australia, Wales, or Cornwall, and it behoves the investor to be on the look out against fraudulent specimens, represented as being obtained from home mines.

In this matter of specimens, considerable difficulty has been experienced. Specimens have been brought to me, but not left with me for examination, to induce me to believe in the presence of rich ores in particular properties. In other cases, the proprietors are the innocent cause of self-delusion; anxious to save the expense of a survey, by what they consider a safe expedient of an assay, they send up specimens culled by a captain or miner untrained in gold mineralogy, and which, if found to contain gold, often give rise to false conceptions, because it may be that the richness of a specimen may be an indication of the poverty of the sett, rather than its value. There are many genuine specimens I have seen which were induced me to distrust the value of the sett for mining purposes, and I hope I have been the means of serving some of my customers in such cases. The only safe way is that suitable specimens should be selected by a competent and experienced professional man, insuring not only the authenticity of the specimens, but that they are so obtained as to give indications of the mineralogical characteristics. For want of such able offers, and invested money in machines and operations when they will never obtain gold enough to replace the capital.

I have long stated, and I hope I have given sufficient reasons for my opinion, that I prefer moderate and abundant ores in proper positions to those which, being rich at the surface, give no adequate evidence of being found continuous and extensive. This I consider very difficult, although there are exceptional cases of rich lodes. As to what is the lowest workable per centage for gold, I should hardly like to say. I am glad to see that Mr. Murchison adopts my opinion that 5 dwt. will pay under favourable circumstances, and that there are favourable circumstances Mr. Watson shows in the case of Quintrell Downs (p. 21), where the gossan can be got at a cost of 4s. per ton; but whether, after all, it contains gold enough to pay, I should not like to say, for not having

veyed the mine I do not know whether it contains gold at all. I think it very possible that there are cases where 3 dwt. may pay, but it is of very little importance what the per centage is in the ores unless there is a suitable means of extraction, dependent on the nature of the ores. In many cases the gold will never be got out of the ores, and in others, what is got out will never pay the cost of reduction. A few months will very likely show that there are numerous places on which reduction apparatus and stamps will be found to be mere lumber, and the workings be abandoned in despair, the proprietors being convinced that the mine will never pay, because their ill-advised proceedings have not succeeded. I perfectly concur with Mr. Hopkins, that there are numerous cases where mercury and amalgamators, so far from being beneficial, will be a cause of loss; but I cannot affirm that the mechanical treatment is, scientifically, the universal and preferable mode of treatment, as some of your correspondents assume.

#### THE GOLD FIELDS OF AUSTRALIA.

We have advices from Melbourne to the 17th Dec. The accounts are not very favourable, either as regards the condition of the import markets, the extent of the gold production, or the future supply of wool. With regard to imports it is remarked, that notwithstanding the quantities daily being forwarded to the gold-fields, the market was still depressed by heavy stocks, which is accounted for by an unlooked-for falling off in the amount of immigration, coupled with the fact that although the mines were still producing largely, the weekly total was comparatively unsatisfactory; since it was now about 40,000 ozs., against more than 100,000 at the corresponding period of last year.

The Government escort that arrived at the Treasury in Melbourne on the 29th Nov., brought the following quantities of gold:—From Castlemaine 23,283 ozs., the last number was 11,613 ozs.; from Golden Point 41 ozs., Fryer's Creek 1012 ozs., Mount Franklin 177 ozs., Sandhurst 22,967 ozs., Eagle Hawk 497 ozs. The M'IVor escort brought from M'IVor 2209 ozs., and the Ovens escort 4193 ozs. The last number from M'IVor was 2068 ozs., from Warranga 333 ozs., from the Ovens 3164 ozs., Snake Valley 60 ozs., Reid's Creek 4 ozs. The Ballarat escort brought from Ballarat to Melbourne 415 ozs. of gold, and left at Geelong 6689 ozs., bringing in all 10,904 ozs. The last number from Ballarat is 3290 ozs., and from Creswick's Creek 260 ozs.

Gold shipped from Victoria in 1853. 2,141,576 ozs.

For Margaret, from Geelong to Sydney ..... 300 "

2,141,876 ozs.

Or, 98 tons 4 cwt., 13 lbs., 4 ozs., at 73s. = 8,338,578.

The opening price of gold for the week was 76s. 6d. per oz., to the number of purchasers anxious to invest previous to the next steamer making its appearance, it rose to 76s. 9d., at which it left off firm. A considerable falling off had taken place during the last week in the produce from Bendigo, amounting to upwards of 2000 ozs. This is partly to be attributed to a large number of the diggers being attracted to the Ballarat side, and to Forest Creek.

The Council of Victoria had been compelled to pass the new Gold Fields Management Bill very hurriedly, the term of the temporary Act expiring on the 1st December. The new Bill was read a third time, on the 29th of November. The scale of the license fees has again been altered; it is now fixed at £1. for one month, and £1. for a whole year; the fee for three months is £1., for six months £1. This alteration has been strongly objected to, as it removes the inducement to take out annual licenses, offered by the former scale. Those who take out a license for the year will be entitled to the political franchise for the future representatives of the gold fields in the Legislative Council, and will also have a right to a plot of ground on the diggings, to cultivate as a garden. The annual license fee, therefore, partakes of the character of rent. The amount of royalty to be paid by mining companies taking leases of land for their operations is fixed at 1-20th of the produce. In consequence of the strong opposition it met from all parties in the Council, the Gold Export Duty Bill was withdrawn by the Government. The lowest license fee in the Victoria gold-fields, under the new Act, is twice the amount of that levied by the last regulations of the Government of New South Wales, in that province, and the rates for licenses of three, six, and twelve months, are 33 per cent. higher in Victoria than in the northern fields.

The following intelligence is from the diggings:—Mount Alexander: Two Americans here, having realised 40 lbs. of gold from a small spot of ground on the far-famed Red Hill.—Forest Creek: The accounts from the Pyrenees or Avoca diggings, about 50 miles from the Forest Creek, are of the most exciting nature, but at the same time very conflicting. Our own diggings are progressing very favourably. Already the diggers are presenting the appearance of a determination for a thorough working. The flat immediately in front of the old Red Hill, is now being thoroughly turned up, and with a very few exceptions the holes are yielding favourably. On the flat at the back of Joshua's store, the claims now at work are yielding very favourably. The system of draining the flats and gullies with Californian pumps has answered admirably well. On the 26th Nov., the accounts from the Pyrenees did not realise the expectations, and one great disadvantage is the want of water in the immediate locality. Although gold may be obtained in almost every claim, the high rate of cartage to the water considerably diminishes the quantity, so that ultimately the workings are in no way remunerative.

Prices of goods on the Bendigo are lowering, chiefly in consequence of the facilities for bringing them up afforded by the fine weather. Gold remains at 34. 15s. per oz.

Three carloads of coal had been paraded through the streets of Melbourne, as the first raised in the province. The blocks, which were large, were found near Cape Paterson, close to the sea-shore; they appeared to be surface specimens.

**SYDNEY.**—The superiority of the Panama route from Australia is illustrated on Wednesday by the arrival of advices by the West India mail, dated Sydney, 10th Dec. There had been no remittances of gold since the sailing of the Sydney steamer on the 7th Dec. The *Hertfordshire*, with labourers for the Sydney Railway, and other emigrants, from London, had just arrived. The accounts from the New South Wales gold fields seem on the whole more favourable; at Braidwood, especially, there was a marked improvement, and some fresh discoveries had been reported at Twofold Bay, and near Albury. The prices of shares remained without alteration—Bank of New South Wales, 32; Hunter River Railway, 5 pren.; and Great Nugget vein, 4 to 5 pren.

**SOUTH AUSTRALIA.**—We have advices from Adelaide to the 24th Nov. The bill authorising a loan of 150,000, for the construction of a railway from the city to the port had been passed. The only objection made to the measure was that the sum named was too small. The gauge adopted for the line is 5 ft. 3 in.

#### ANTI-FRICTION SCREW-PROPELLER, AND MARINE CARRIAGE COMPANY.

—We again beg to lay before our readers another series of trials made by the screw patented by the Anti-Friction Screw-Propeller Company, which more fully substantiates the superiority of the new patent over those hitherto invented. We are also pleased to hear that the drawings have been, by order of the Lords of the Admiralty, inspected by their engineer, appointed for that purpose, and that he has highly approved of the inventor's plans. They will now be laid before their lordships, and if the screw really possesses the merits which the past trials have shown, we hope it may be adopted in Her Majesty's ships of war.

Trial of screw models in water, 1 foot diameter, with a power of 30 lbs., travelling at the rate of 220 feet per minute, produced the following results:—

Weight.	Height.	Revols.	Time.	Sec.
1 lb.	in.	in.	sec.	
to it, lifted on the end of a lever 12 in. long	4	4	80	18
Also	7	3½	185	42
And would not lift more with any additional amount of power.				
Anti-friction screw, without the anti-friction rollers, lifted	4	4	40	8
Also	7	4	70	14
Also	14	3½	175	32
Dead weight 15 lbs.				
The arrangement of this screw is adapted to vessels as at present constructed, without alterations.				
The anti-friction screw, suited to the alteration of the keel, and anti-friction rollers, lifted	4	4	20	6
Also	10	4	90	16
Also	14	4	190	30
Dead weight 20 lbs.				

His Royal Highness Prince Albert, attended by Viscount Torrington and Colonel Biddulph, inspected, on Thursday, the magneto-electric machine for the production of gas, at Mr. E. Shepard's residence, 15, Onslow-square.

#### ON SOME NEW COMPOUNDS OF PHENYL.

—At the Royal Society, a paper was read by Dr. Williamson, which contained a notice of some beautiful results obtained on an investigation of carbonic acid on hydrated oxide of phenyl.

When pentachloride of phosphorus is added to hydrate of phenyl, the action is at first very energetic, hydrochloric acid being evolved, and the mixture becoming hot; but, after a time, the addition of fresh portions of pentachloride produces no perceptible action, unless the mixture be heated. Oxychloride of phosphorus is formed, as well as a neutral oily body, which is insoluble in aqueous potash at the common temperature, but soluble with decomposition in boiling potash. This oily compound would, from its mode of formation, be naturally supposed to be the chloride of phenyl, and it has been so considered by some distinguished chemists. It may, however, be separated by distillation into two perfectly definite and distinct bodies, one of which boils at 150°, the other at a temperature above the range of mercurial thermometers. The former of these is a colourless mobile liquid, possessing a fragrant smell, not unlike that of bitter almonds. The latter is a more consistent inodorous liquid, solidifies at a low temperature into a mass of colourless crystals. The liquid having the boiling point of 136°, nothing else than the chloride of phenyl. The crystalline body is the phosphate of phenyl, and is one of the most beautiful products in organic chemistry. In the liquid state it is slightly yellow by transmitted light, and it reflects the more refrangible rays with a fine opalescent appearance, due, no doubt, to the anomalous refraction. The epipolar rays, visible by ordinary daylight on and at some depth below its surface, are of a fine violet tint, differing decidedly from the blue colour exhibited by bisulphite of quinine in like circumstances. The flame of sulphur does not bring out this effect stronger than the diffused light of the sun.

**THE POST-OFFICE LONDON DIRECTORY, 1854.**—It has of late years been the usual practice with the proprietors of this highly valuable periodical to publish a supplemental addition in March, containing any changes which may have occurred since the publication of the Christmas edition, and reprinted details of the postal and parliamentary portions. This year, however, in consequence of the unprecedented demand, both in London and the provinces, it has been found necessary to re-print the entire volume, and advantage has been taken of the opportunity to introduce some important additions and alterations. For instance, among public societies, several are inserted which were not included in the Christmas edition, and the whole may be now considered as a perfect encyclopaedia of this vast metropolis. A plan has also been adopted of colouring the front edges of different tints, accurately to mark out the several divisions of the work. We cannot, however, avoid thinking that this colouring is almost unnecessary, as the double lines on the edges, as first adopted in the Christmas edition, appear to us efficient in every respect, and all that is requisite to facilitate reference. The spirited enterprise with which Messrs. Kelly have, year after year, endeavoured to make, and succeed in producing, continuous improvement, in the Directory, is eminently deserving of that increased public attention, and support which we are happy to find they have obtained; and the March edition, just circulated, certainly surpasses all previous efforts in its arrangements and artistic finish, and evinces a liberality of spirit deserving of the highest encouragement.

#### THE IRON AND METAL TRADES OF SOUTH STAFFORDSHIRE.

[FROM OUR CORRESPONDENT IN BIRMINGHAM.]

MARCH 23.—The trade report this week might be summed up in a few brief sentences—more caution, less exports, and reduced home consumption, has characterised all the transactions of the week in connection with the general trade of the district. Exclusive of the decidedly unfavourable effect produced by the war, the close of the quarter necessarily limits the demand for all goods to be included in the current account, and purchases are regulated by the urgency of demand.

The Iron Trade during the past week has maintained its position amongst the most fortunate of manufacturing interests. The demand is still reported ahead of the supply, and the furnaces are consequently at full work. I heard to-day of circulars having been received here from Yorkshire, announcing an advance of 20s. per ton upon bars, accompanied by an intimation that less cannot be received. Now, as I am unacquainted with the extra fortunate circumstances which may have led to this advance, I cannot, of course, say how far it can be maintained, but I may safely say there is no intention on the part of the iron masters of South Staffordshire to make any further advance at present. It may be that some few persons in the trade are desirous of realising another pound per ton, but the vast majority are opposed to it, and determined to let well enough alone.

In the Copper Trade there has been increased animation during the week, and a good trade done at the quotations of last week. Amongst the dealers in this article the arrival of Captain Townley, the Queen's Messenger, with the final answer of the Czar to the ultimatum of the Allied Powers has been looked forward to with much interest, inasmuch as the final stoppage of the supply of copper from Russia must lead to a change in the market, if our own mines do not prove adequate to the demand. The telegraphic announcement made in the *Chronicle* and *Times* on Monday, in anticipation of the arrival of the messenger, has not up to the present time been acted upon, and as a few hours must remove all doubt, speculation is useless. In the meantime the marine store dealers are active, and continue to forward their quota of old metal. Had it not been for the great advance in the price of copper, we never should have known the amount of old scrap in the country, available for manufacturing purposes. And whilst noticing this trade, I may advert to the new copper coinage, as furnishing a large and daily increasing source of demand. In the month of July last, Messrs. Ralph Heaton and Son, of Bath-street, entered into a contract with the Government for stamping the new copper coin, and since then they have worked up about 100 tons weight in making the various coins, nearly all of which have been sent to Ceylon, the Ionian Island, and Ireland. They are now actively employed stamping for England, and as very few have as yet been issued, the consumption of copper for this article alone must be very considerable. The demand for copper coins is very numerous and urgent, and nothing short of the powerful machinery which the above firm has brought to bear upon the work, could be in any way adequate to the undertaking.

In the Tin Trade there has not been any material change since my last. Quotations remain the same, with a brisk demand and a good supply. With respect to the general hardware trade, there is very little to report. Unless for the American and Canadian markets, the orders during the past week have been comparatively limited, nor can we expect any active change until something definite is known relative to the safety of continuing our exports. In addition to other causes operating unfavourably against us, is the high war premium on insurance, which on a large contract constitutes a serious item.

In addition to the successful state of the iron trade, may be added that of the British Plate Glass Trade. The demand has been so extensive as to justify an advance of price, amounting to about 15 per cent., which was made known by circulars yesterday. The consumption of this description of glass in England and Ireland is very great, and the orders at the Smethwick and other works in the district are far more extensive than can be executed.

The orders for railway carriages and heavy rolling stock for the English and Continental lines received by the leading houses during the past month, have been very numerous, and several thousand hands are now constantly employed in the various manufactories. At the extensive works of Brown and Marshall, the greatest activity prevails in executing orders for the home railways; indeed, so great is the demand for every description of wagon, that this firm has erected very large premises alongside the railway. The Birmingham Station, where they will have every facility for completing the orders on hand. At the Salter Works there is also considerable activity, and fresh hands have recently been set on.

#### IRON AND COAL TRADES OF YORKSHIRE AND DERBYSHIRE.

[FROM OUR CORRESPONDENT IN DONCASTER.]

MARCH 23.—An extraordinary increase has latterly taken place in the Coal and Iron Trades in these counties. A large number of new works have been recently erected, and many of those which were established some few years ago have been doubled in extent. The general trade in all descriptions of iron has never been more prosperous than it is at the present time, and although the country is on the verge of war, business operations are not as yet affected by it. The extensive iron-works at Stanton, near Derby, are very busy; and their neighbours, the Butterley Iron Company, are so full of orders, that they have been obliged to buy pigs, their own make not being sufficient to meet the demand made upon them. A Staffordshire house has just commenced some new works in the same locality, and land, between the Wingworth Iron Company's works and Derby, has been purchased, on which it is intended to carry on the iron trade on an extensive scale. The Renishaw Iron Company's and Mr. Rangley's works, near Dronfield, also participate largely in this state of prosperity. The demand for all descriptions of iron continues good, and we are not aware of a single furnace out of blast. The railway-wheel trade, which is extensively carried on at Rotherham, is very active; and a new trade is springing up there by the extensive demand now made for bars used in the construction of railway wagons. So great are the enquiries for plates required for ship-building, that the Park Gate Iron Company, in addition to the mill which has been in operation some time, have just erected a new one, which is about to be commenced. During the past week we have had large enquiries for iron for Montreal, and extensive orders in the market from "the States" for railway materials of all descriptions. Mr. Sykes, the contractor, of Brightside, near Sheffield, has just undertaken a contract for 600 tons of iron in America; and it is reported that Messrs. Peto and Betts have railway contracts in Canada amounting to 11 millions. We quote the prices of iron in these counties as follows:—Bars, 10. 10s.; hoops, 11. 10s.; sheets, 12. 10s.; at the works; Scotch pigs have realised 79s. per ton, the price never fluctuating more than 6d. either way; Derbyshire pigs, 41. 15s. to 51.

The demand for steel from America and Germany is very great, and orders are on the books of some of the larger firms, which will take months to execute. The commercial transactions of the Sheffield manufacturers with Russia have been closed; but it is not anticipated that this step will cause much depression. A Custom House order was last week received from Hull prohibiting the exportation of files; but this important matter having been represented to the Treasury by Mr. Hadfield, M.P., one of the Members of the town, the order has been rescinded; but bond is required to be given, as the subjoined letter will show:—

*Custom House, London, March 11.*

Sir.—With reference to the letters forwarded by you to the Treasury, respecting the stop placed by the officers at Hull on the shipment of certain files for Amsterdam, &c., I am directed to acquaint you, that the board have instructed the collector and controller at Hull to permit the shipment to go forward, upon bond being given, specifying the number of packages and description of the articles, for the due landing of the same at Amsterdam, and production of proof under the hand of the British consul there, and to govern themselves accordingly in similar cases.—J. G. GARDNER.

There are about 2000 persons employed in the file trade—a fact sufficiently important to show that the interests of the trade would have been materially injured, had measures not been taken to obviate it.

The coal trade is remarkably active, and although the supply has been increased, there has been no reduction in price. New collieries are being formed in various parts of Yorkshire, and especially in Derbyshire, some of which we shall notice on a future occasion. Two or three private coal companies are also being established for the supply of this useful article at a much less cost than is done at present.

**NEW RAILWAY SOUND SIGNAL.**—Mr. H. King, of Gilbert-street, Oxford-street, has patented a simple and efficacious apparatus for enabling the guard of a railway train instantly to sound an alarm signal, when circumstances require it. It consists of a small but powerful pair of bellows, fixed on the roof of the guard's brake van, the nozzle of which is connected to a powerful whistle. The top plate of the bellows is continued in length considerably beyond the base, thus forming a powerful lever, enabling the signal to be sounded exceedingly loud, and capable of being heard at a great distance. There are springs inside, which always keep the bellows extended for use. The apparatus is also applicable to omnibuses, enabling a passenger to call the guard's attention, without disturbing his fellow-passengers. A cord and ring attached to the apparatus outside is brought through the roof, and a passenger requiring to get out only to pull it downwards, which sounds the signal. A code of peculiar signals may, by this apparatus, be arranged, depending on the number, rapidity, and duration of the several sounds.

The magnetic water-gauge consists of a copper ball float, which rises or falls with the water, attached to a magnet by a brass rod behind the dial-plate, which causes a moveable steel hand to indicate the height of the water to the greatest nicety. There is also a modification of this arrangement, by which the magnet attracts the needle round the face of a graduated dial-plate. The water-pressure indicator is specially useful to water companies; its principle is similar to the steam-indicator, the dial-plate being graduated to show any pressure up to a column 600 ft. high. It is well adapted for testing the strength of mains, and the constant actual pressure of water. The vacuum gauge shows on a circular graduated dial-plate any vacuum up to a pressure of 15 lbs. to the inch.

**GOLD IN IRELAND.**—On Thursday, three labourers who were at work at Ballykilty, County Clare, upon the property of Mr. Blood, through which the Limerick and Ennis Railway is to run, accidentally turned up by the side of a large quantity of valuable antique Irish gold ornaments, of which they eagerly possessed themselves, and one of the parties, who filled his hat with this precious metal, sold it to the first who offered in Newmarket, whether he ran with his body, for £30. The gold is of the purest description, consisting of armlets, rings, bracelets, collars, &c., and worth £1 per ounce. The lot which the man sold in Newmarket for £30 weighed 110½ ozs., and is valued by Mr. Wallis of this city at £400.—*Limerick Chronicle.*

**LIMITED PARTNERSHIPS.**—An erroneous impression appears to exist in England as to the extent of the responsibility of shareholders or partners in the joint-stock manufacturing companies of the United States. The agent or secretary, manager, treasurer, and directors, being also shareholders, are held by the law fully responsible, to the extent of their means, for the results of the management entrusted to them. The limited responsibility is, therefore, wisely confined to the non-managing shareholders, the latter being liable only for the amount of their subscription for shares.—*Mr. Wallis's Report* (New York Industrial Exhibition).

#### WEEKLY LIST OF NEW PATENTS.

##### APPLICATIONS FOR PATENTS, AND PROTECTION ALLOWED.

A. V. Newton: Protecting iron from oxidation.—A. E. Bellford: Admitting steam to cylinders of oscillating engines.—J. Medwin: Water gauges for steam-boilers.—J. T. Way, and J. M. Paine: Gas.—J. and T. Sibley: Cutting discs out of metal plates.—A. Barclay: Lubricating shafts; also, mining engines.—H. D. Mertess: Steam-engine valves.—J. Warhurst: Steam-boilers.—T. H. de Nivelle: Separating metallic from earthy substances.—P. A. de S. S. Sicard: Purifying water.—W. Brookes: Amalgamator.—W. Clay: Manufacture of axes, &c.—J. D. Brunton: Wind guards.—W. Warne: Tubular steam boilers.

##### WEEKLY LIST OF PATENTS SEALED.

B. F. Weatherdon, Chancery-lane, and M. S. Hooper, Sydenham—Improvements in railway signals.

H. Baronds Bode, Albert-street, Camden-road—Improvements in the manufacture of wheels.

T. W. Walker, Hanley—Improvements in the manufacture of crates made of wood for use of potters.

M. O. Le Sage, Paris—Improvements in hydraulic engines.

T. W. Kennard, Duke-street, Adelphi—Improvements in constructing piers and foundations under water.

**LONDON AND NORTH-WESTERN RAILWAY.—TO COAL**  
PROPRIETORS.—The DIRECTORS have it in contemplation to extend considerably their accommodation for the RECEPTION of COALS at Camden, Kilburn, and Shepherd's Bush, and invite PROPOSALS from parties desirous of sending coal to London.—All communications, by letter or personally, to be made to the general manager of the company, at his office, Euston Station, and it is requested that, in any application for wharfage, it may be stated whether tipping stages are required, or accommodation on the level.

By order, CHARLES E. STEWART, Sec.

Euston Station, February 1, 1854.

**ANTWERP AND ROTTERDAM RAILWAY.—NOTICE**  
OF FORFEITURE.—The first section of the railway from Antwerp to Rosenlund, with a service to Bergen Op Zoom, and from Rosendal to Oudenbosch, or to Eijsden, near Breda, composing two-thirds of the main line, being so far completed as to open for traffic in May next, the Directors hereby give notice to those shareholders whose CALLS are in ARREAR, that the necessary measures will be forthwith taken to FORFEIT such SHARES, in the manner prescribed by the statutes of the company, as granted by the Dutch and Belgian Governments.

The works of the remaining sections are far advanced, and nearly the whole of the rails and rolling stock, and other materials, purchased and delivered, so that the opening of the entire line may be confidently expected in the ensuing autumn.

By order, RIXON AND SONS, Solicitors to the Company,  
11, King William-street, City, March 10, 1854.

**ANTWERP AND ROTTERDAM RAILWAY COMPANY.—**  
PAYMENT OF INTEREST.—Notice is hereby given, that INTEREST, at the rate of FIVE PER CENT. per annum for the half-year ending March 31, 1854, will be RECEIVABLE on and after the 4th of April next, on the amount paid up (£5) on the shares of this company.

The certificates must be left at the offices of the company, 16, Cannon-street, City, seven clear days previous to the delivery of the interest warrants.

The amount of interest payable on the respective certificates is as follows:—

On a certificate of 5 shares	£0 15 11
Ditto 10 ditto	1 11 10
Ditto 20 ditto	3 3 8
Ditto 50 ditto	7 19 2

Shareholders who have paid up the whole amount, are entitled to interest at the above rate (£5 per cent. per annum) upon £10 shares.

By order of the Board, RIXON AND SON, Solicitors of the Company,  
11, King William-street, City, Feb. 21, 1854.

**IRONWORKS IN NORWAY.—FOR SALE, THE HASSEL IRON-WORKS**  
situated about 20 English miles from the town and port of Drammen, in NORWAY and in one of the best wooded districts, having good ore, and the advantage of cheap charcoal. The property is rated at £23,000, and the machinery, mills, models, &c., are all in good order, and mostly new.—For further particulars, apply to the Directors of the Hassel Ironworks, Drammen, Norway, or to their correspondents in London, Messrs. Sewell and Neck, 52, Gracechurch-street, City.

**NORTH WALES FOUNDRY AND COLLIERY**, on the estuary of the Dee at Mostyn, near Holywell.—ON SALE, together or separately (on account of the decease of the managing partner), LETTY COLLIERY, in full profit, and held on a long lease, with a siding into the Chester and Holyhead Railway. Also, the LEASE and GOODWILL of an extensive and recently erected IRON and BRASS FOUNDRY, STEAM-ENGINE and BOILER FACTORY, SCRAPPING FORGE, SAW MILLS and SHIP BUILDING and TIMBER YARDS, fitted with new and powerful tools, steam power, and gas works. The works, which are in full operation, stand on an enclosure of 3 acres, near the mouth of the Dee, 20 miles by sea from Liverpool, and 19 by rail from Chester, being well adapted for building and repairing wood and iron steamers, locomotives, land and marine steam-engines, and railway wagons. There is a direct frontage into the tide-water of 310 feet, and a railway siding. The Mostyn and Letty Collieries abut upon the premises, and ensure a cheap and abundant supply of excellent fuel. There are dwelling houses for clerk, foreman, &c. The foundry will be let, if not sold.—Apply to Mr. John Grantham, C.E., Liverpool; Mr. J. P. Eytoun, merchant, Llanerchymor, Holywell; or Mr. Jas. Eytoun, Mold.

**TO BE DISPOSED OF**, the SETT of a very valuable IRON MINE, extending about half-a-mile in length. Has been worked to the 11 fathom very advantageously, and a fine lode of iron left in the bottom, being as deep as it could be worked without machinery, for which the present proprietor does not feel inclined to make the outlay alone, and wishes to enter into any company. Price of sett, £300.—Apply to Mr. THOS. CLARK, Creborth-crescent Cottage, Bodmin. March 14, 1854.

**CARNARVONSHIRE, NORTH WALES.—TO BE SOLD**, or LET ON LEASE, to work for a term of years, TAN-Y-GARREG and TYDEN BACH, in the parishes of Llanuwchllyn and Bettws Garmon, being about 185 acres, on the road from Carnarvon to Beddgelert, within five miles of Carnarvon. These two tenements abound in minerals of the richest kind—copper, sulphur, ironstone, and slate rock. The indications are such as to promise it to be very productive, and is well worthy the attention of mineral speculators.—For particulars, and to treat, apply to Mr. J. LLOYD, county surveyor, Carnarvon.

**SLATE QUARRY—FOR SALE**, the LEASE (38 years unexpired), PLANT, &c., of a SLATE QUARRY of unlimited capabilities, good roads, and convenience for a private harbour three-quarters of a mile distant. £2500 already expended in development, proving the certainty of an enormous supply. Extensive orders received, and demand increasing. Requiring about £3000 outlay to be placed on the most profitable footing. As the chief holder is about to withdraw, the entire quarry is now offered for sale, but the other holders would willingly retain their interest in it, at the option of the purchaser.—For further particulars, address "H. E." care of Messrs. Powell and Cooke, 1, Crown-court, Threadneedle-street, London.

**SLATE AND SLAB QUARRY**.—In consequence of the extraordinary demand for slate goods, the OWNER of a valuable QUARRY in one of the best slate districts, in the county of Merioneth, now working on a small scale, wishes to MEET with a COMPANY with a moderate capital to work the same on royalty.—Apply to David Howell, Esq., solicitor, Machynlleth, or Mr. David Davies, Abercavies, North Wales.

**VALUABLE BITUMINOUS COLLIERY NEAR SWANSEA**.—TO BE LET, and entered upon immediately, a COLLIERY, now producing about 100 tons a day, situated within a very short distance of the town of Swansea, containing several good sized VEINS of BITUMINOUS COAL, under a surface of upwards of 200 acres of land. The plant to be purchased at a valuation.—For full particulars, and to inspect plans, &c., apply to J. TREV. JENKIN, Esq., Swansea.

**TO BE LET FOR A TERM OF YEARS, OR SOLD**, a valuable TRACT, containing all the well-known VEINS of ANTHRACITE COAL and IRON MINE of the county of GLAMORGAN.—For further particulars, apply to "D. E. F.", Post-office, Neath.

**MILFORD HAVEN ANTHRACITE COAL**.—TO BE LET, for a term of years, all the several VEINS of very valuable ANTHRACITE COAL and CULM lying under the farm of CRESSWELL, in the parish of Lanvenny, in the county of Pembroke, containing about 300 acres of land, together with the QUAYS and WHARFS erected on the said farm, on the banks of the navigable River Cleddan. The above highly desirable mineral property is situated on a branch of Milford Haven, within six miles water carriage of the terminus of the South Wales Railway; could be advantageously opened within half-a-mile from the shipping place, and is worthy of attention, both from its peculiar local advantages and the value of the coal. For particulars and to treat, apply to Mr. Marriott, solicitor, 1, Lancaster-place, Strand, London; or to Mr. Summers, solicitor, Haverfordwest.

Milford Haven, March 11, 1854.

**A NTHRACITE COAL**.—A VEIN of this superior COAL, of the finest quality, showing a face of 6 ft. thickness, has just been struck at about 60 fms. depth. The colliery is situated on one of the Estuaries of Milford Haven, with access to water-carriage from a wharf belonging to the same proprietor, and within one mile and a half of one of the proposed stations on the South Wales Railway, now in rapid formation between Haverfordwest and Neyland, the terminal point of Milford Haven. Parties with competent capital to work the same may receive every information, and terms, on application to Messrs. JOHN HARVEY and Sons, Land Agents, Haverfordwest, Pembrokeshire.

**TO CAPITALISTS AND PUBLIC COMPANIES—WIGAN COAL FIELD**.—TO BE LET, ON LEASE, all those several BEDS or VEINS OF COAL, known as the YARD MINE, FOUR FEET MINE, SEVEN FEET MINE, and PEMBERTON FOUR AND FIVE FEET MINES, containing altogether in thickness 23 ft. of good workable coal, suitable for all purposes, within 300 yards of the surface, under 350 statute acres of land, in the township of Ince-in-Makerfield, one mile south-west of the parish church of Wigan.

The situation of this coal-field, as regards land and water carriage, is unexceptionable, being intersected by the North Union Railway, and the Leigh branch of the Leeds and Liverpool canal, and is well worthy of particular attention in the present prosperous position of the coal trade. Other mines, including the Cannel Coal and King and Arley Mines, lie underneath this estate, and if desired would be included in lease. The higher mines alone are capable of yielding 800 tons of coal per day for 45 years.—Further information, on application to Mr. ELIAS DORRIS, mining engineer, 41, John Dalton-street, Manchester.

**TO CAPITALISTS.—TO BE DISPOSED OF**, the SOLE RIGHT to MANUFACTURE in LONDON, and within a certain range thereof, a PATENT HYDRAULIC and ARCHITECTURAL CEMENT. It is equal in quality to the Portland cement, while it is immensely superior in colour to the best specimens of that article. The mode of manufacture is more simple, and the material, which is secured, is practically unlimited in quantity, and will cost absolutely nothing. As the right will only be disposed of for a considerable sum, none but capitalists need apply. The patent will afford all needful practical directions in the manufacture.—Address, "S. P." Box 81, Post-office, Manchester.

**A USTRALIAN CONSOLS GOLD AND COPPER MINES**.—At a MEETING of the shareholders of this company, held at the London Tavern, pursuant to notice, this day, the report of the committee of management was read. It was moved from the Chair, and seconded by W. E. JAMES, Esq.:—

The same was received and adopted.—Carried unanimously.

A committee of shareholders was appointed, to confer with the directors on the present position of the company and its properties, and for the directors to report thereon to the shareholders at an early day.

W. ANDREWS, Sec. pro tem.

**THE QUARTZ ROCK MARIPOSA GOLD MINING COMPANY**.—Notice is hereby given, that the ANNUAL GENERAL MEETING of this company will be HELD at the London Tavern, Bishopsgate-street, in the City of London, on Friday, the 31st day of March inst., at One o'clock precisely, to receive the reports of the directors and auditors, to elect two directors in the room of Alderman Farncomb, and Thomas Houghton Hardinge, Esq., who retire by rotation, and do not offer themselves for re-election, in whose stead Lieutenant-Colonel Grant, and Robert Gilman, Esq., qualified shareholders, offer themselves for election; and to elect auditors, and for transacting the general business of the company.

March 16, 1854.

By order, J. WADDELL, Sec.

### MINING, AND GOLD DIGGINGS, SPECULATIONS.

Mr. HOPKINS has just RETURNED from AUSTRALIA, and will immediately RESUME his PROFESSIONAL DUTIES in LONDON, as CONSULTING ENGINEER on MINERAL PROPERTIES, &c.

His clients will receive in a few days every information relative to the Gold Regions of Australia, and what is required to ensure success to public companies in that part of the world.—38, Thurlow-square, Brompton, 3d March, 1854.

**M R. N. ENNOR** being pressed by the public to make his ANNUAL ROUND through DEVON and CORNWALL, has consented to do so, commencing about the 23rd March. Letters addressed to him at Wiveliscombe will be forwarded.

**CAPT. THOMAS DUNN**, of TAVISTOCK, undertakes to INSPECT, REPORT, and SURVEY any MINES or MINERAL PROPERTY in ENGLAND, IRELAND, SCOTLAND, or WALES. No objection to take the management of any mine or mines in the neighbourhood of Tavistock.

**THE METAL TRADE.—WANTED, A CORRESPONDENT**, competent to keep his PRINCIPAL THOROUGHLY INFORMED on the STATE and PROSPECTS of the METAL TRADE. The correspondent will have to forward a weekly report, describing the actual state of the trade, with references to causes and probable events calculated to have an effect on supply and prices at home and abroad.—Address, "J. M.", care of Messrs. Johnson and Proffitt, Peele's Coffee House, Fleet-street, London.

**M I N E R A L A G E N T.—WANTED A COMPETENT MAN**, ACCUSTOMED to UNDERGROUND OPERATIONS, and the management of men speaking Welsh—references required.—Application to be made in writing, stating salary, &c., "Box 20," Post-office, Cardiff.

**T O TIN-PLATE MAKERS.—WANTED**, by a continental maker, a COMPETENT PERSON to UNDERTAKE the WHOLE MANAGEMENT of the TINNING DEPARTMENT in his works. None need apply who cannot produce the highest testimonials as to ability, experience, and character.—Apply, with qualifications and terms, to Messrs. E. SIEVEKING and Son, Sise-lane, London.

**T O COLLIERY AGENTS AND ENGINEERS.—WANTED**, by parties connected with Australia, a PERSON EXPERIENCED in the CONDUCT and LAYING OUT of a LARGE COLLIERY, possessing a knowledge of machinery and engineering, and capable of superintending the erection of engines, the formation of sea wharves and piers, and of planning railways to communicate with the same.—Address, "J. H. R.", 11, Broad-street-buildings, City, London.

**T O IRONMASTERS.—WANTED**, an ENGAGEMENT as FORGE and MILL MANAGER, by one who has had an extensive and long practical experience in the business in all its branches. Satisfactory references can be given of six years' standing from his last employer.—Address, "J. H.", Post-office, King's-winford, South Staffordshire.

**WANTED.—AN EXPERIENCED and PRACTICAL MANAGER**, for the WORKING of an extensive SLATE QUARRY, near Bangor, North Wales. The duties required would be to superintend generally the works, both in the working and manufacture of the slates; to keep the accounts of slates, and conduct the correspondence; and, as the works employ both steam and water power, a competent knowledge of the machinery connected therewith is essential. Most satisfactory testimonials will be required.—For particulars, apply to Mr. Millett, solicitor, 18, King's Arms-yard, Moorgate-street, London.

**A N EXPERIENCED CIVIL ENGINEER, INVENTOR and PATENTEE of IMPROVEMENTS in HEATING**, now in operation, of unrivalled economy, and of the most extensive applicability, is willing to DISPOSE of an INTEREST in his PATENT RIGHT, GRANT a SPECIAL LICENSE for a company, or UNITE with one or more CAPITALISTS in carrying out his intention on an extensive scale, on very liberal terms.—Apply, by letter, to "F. F.", at Messrs. BENNETT and PAUL'S, solicitors, Sise-lane, BUCKSBURY.

**P ARTNERSHIP.—TO PARTIES IN THE IRON TRADE**.—The ADVERTISER is desirous of MEETING with a PARTY possessing not less than £10,000, to JOIN a corresponding capital in the ERECTION of BLAST FURNACES, where iron can be produced at a better profit than in any other blast in England, and with less capital.—Address, "X. Y. Z.", Mining Journal office, 26, Fleet-street, London.

**T O CAPITALISTS, ENGINEERS, AND OTHERS.—PARTNERSHIP**.—THE PRINCIPAL in an extensive and increasing business in one of the Midland Counties is desirous of meeting with a PARTNER possessed of a general knowledge of business, who can command a capital of between £7000 and £8000, the whole of which may not be required immediately.—For further particulars, and to treat, apply personal to Messrs. LEWIS, WOOD, and STREET, 6, Raymond-buildings, Gray's Inn, London.

**T O OWNERS OF MINES AND COLLIERIES, MINE CAPTAINS, AGENTS, FARMERS, &c.**—JOHN H. ROBINSON (late J. Oliver and Co.), GEFSE MANUFACTURER, OIL REFINER, &c., NEWCASTLE-ON-TYNE.—Office, 62, Close.

**C ONTRACTORS RAILS WANTED**.—Forty tons of BRIDGE RAILS in good condition, about 40 lbs. to the yard, are required. Parties having such to dispose of, will hear of a purchaser, by addressing "W. W. RAILS," care of Messrs. CLAYTON and SON, 365, Strand, stating price and where delivered.

**W ESTMINSTER IMPROVEMENT BOND FOR £500 TO BE SOLD** for £415, incorporated by Act of Parliament, and payable in 1857, bearing interest at the rate of 5 per cent., payable half-yearly, the next payment in July.—Apply to Mr. BROWN, 2, Adam's-court, Old Broad-street.

**S ULPHUR MINE.—TO BE SOLD**, a FEW SHARES in a valuable SULPHUR MINE in North Wales.—Apply to "A. B.", at the Mining Journal office, 26, Fleet-street, London.

**F OR SALE**.—From 150 to 200 tons of CALAMINE.—Parties wishing to purchase the whole, or any portion of the above, will communicate with Mr. WM. MICHELL, jun., Holywell, Flintshire.

**F OR SALE**.—20 Britannia, 8s.; 50 Perran Wheal Jane, 7s. 6d.; 50 Molland, 6s. 6d.; 10 Zion, 2s.; 50 Trenault, 5s. 6d.—Application to "C. D." Mining Journal office, 26, Fleet-street, London.

**P ERMANENT UNITED.—WANTED TO PURCHASE, ONE HUNDRED SHARES** in PERRAN UNITED MINES.—Apply, by letter, to Mr. DEAN, 63, Gracechurch-street.

**S HARES WANTED**.—Any party having SHARES in PERRAN UNITED COPPER MINES, or GREAT WHEAL LEISURE, may hear of a BUYER by addressing lowest price to "Perranzabuloe," Post-office, Moorgate-street.

**R HOSWYDD SLATE QUARRY, FESTINIOG.—ONE HUNDRED SHARES FOR SALE CHEAP**.—Apply, by letter, to "Washington," City of London News-rooms, 66, Cheshire-street, London.

**T RELEIGH CONSOLIDATED MINING COMPANY**.—The directors hereby give notice, that a MEETING of the shareholders will be HELD at the offices, on Wednesday, the 12th of April next, at One o'clock precisely, at which the accounts for six months, ending 31 March inst., will be submitted.

**G E NERAL MINING COMPANY FOR IRELAND.—NOTICE** of CALL.—Notice is hereby given, that the Board of Directors of this company have passed a resolution, in accordance with the provisions of the Deed of Settlement, and the Statute in that case made and provided, calling upon the several proprietors of shares in said company to PAY A CALL of TEN SHILLINGS upon each and every share held by them respectively; and such proprietors are accordingly hereby required to pay said call into the National Bank of Ireland, College-green, Dublin, to the credit of the trustees for said company, on or before the 15th of April, 1854.

By order, JAMES HAMILL, Sec.

**S OUTH DEVON GREAT CONSOLS MINING COMPANY**.—Notice is hereby given, that the FIRST ANNUAL GENERAL MEETING of the adventurers in this mine will be HELD at the London Tavern, Bishopsgate-street, on Monday, the 10th day of April next, at Two o'clock precisely.

By order of the Board, G. ANGUS, Sec.

**H ILL BRIDGE CONSOLS.—Notice is hereby given, that the ANNUAL GENERAL MEETING of shareholders in the above mine will be HELD at the office of the company, 17, Cornhill, on Friday next, March 31st, at Twelve o'clock precisely.**

**G REAT TREGUNE CONSOLS.—Notice is hereby given, that the ANNUAL QUARTERLY MEETING of shareholders in the above mine will be HELD at the office of the company, 17, Cornhill, on Thursday next, 30th March, at Twelve o'clock precisely.**

**M IZEN HEAD COPPER MINING COMPANY**.—The Committee of Management have the pleasure to inform the shareholders that they have now CONCLUDED AN ARRANGEMENT with the proprietor for PAYMENT of the balance of £1000 due on the mine, thus securing the necessary transfer of the property into the hands of the company.

By order, JOHN MADDEN, Sec.

**N ANTLE VALE SLATE COMPANY**.—Notice is hereby given, that a GENERAL BI-MONTHLY MEETING of the shareholders of this company will be HELD at the office, 42, Moorgate-street, on Wednesday, the 29th of March, at Two o'clock.

**A NGLO-MEXICAN MINT**.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders in this company will be HELD at the office, as under, on Tuesday, the 4th day of April next. The chair will be taken at One o'clock precisely.

ALFRED GODFREY, Sec.

**P ORT TENNANT PATENT STEAM FUEL AND COAL COMPANY**.—Notice is hereby given, that the DEED of SETTLEMENT will LIE at the offices of the company for SIGNATURE, on production of the Bankers' receipt, on and after Monday, the 27th day of March inst., between the hours of Eleven and Three o'clock. The certificates of shares will be ready for delivery on the fourth day after the deed is signed.

By order of the Board.

22, Moorgate-street, London, March 24, 1854.

GEORGE ANGUS, Sec.

**M IZEN HEAD COPPER MINING COMPANY, IN THE COUNTY OF CORNWALL**.

MR. C. WABTON is directed, in pursuance of the resolution of a general meeting of the shareholders in the above company, to SELL, BY AUCTION, at the George and Vulture

**WARWICK LOCAL BOARD OF HEALTH.**  
CONTRACT FOR DRAINAGE AND WATER-WORKS.  
The Board hereby give notice, that they are prepared to receive TENDERS from persons who may be willing to CONTRACT for CONSTRUCTING certain BRICK SEWERS, LAYING certain STONE-WARE, and CAST-IRON DRAIN-PIPES, and CAST-IRON WATER-PIPES, BUILDING an ENGINE-HOUSE, BOILER-HOUSE, and COTTAGE; and SINKING a PUMP-WELL. Also, for SUPPLYING a WROUGHT-IRON TANK, and the CONSTRUCTION of a SERVICE TOWER, and OTHER WORKS.

The contract drawings and specifications may be examined at the office of the undersigned, at Warwick, on or after the 22d Inst., where also copies of quantities and forms of tender may be obtained. Further particulars will be given at the office of Messrs. Russell and Lister, engineers to the Local Board, No. 4, Trafford-square, London. Tenders must be sent in on or before the 14th day of April next. No tender will be entertained unless duly made upon the printed form.

By order of the Board,

JAMES TIBBITS, Clerk.

Warwick, 14th March, 1854.

**COLLEGE OF INDUSTRIAL SCIENCE,**  
NEVILLE HALL, NEWCASTLE-ON-TYNE.  
ASSAY OFFICE and LABORATORY under the DIRECTION of Dr. THOMAS RICHARDSON and Mr. E. J. G. BLOWELL, assisted by Mr. W. CROWDER.

The LABORATORIES are OPEN DAILY, from 9 A.M. to 5 P.M., where instruction is given in every branch of Assaying, Analytical Chemistry, and Chemical Research. Fee for Twelve Months, £22 10s.

ANALYSES and ASSAYS of NATURAL and MANUFACTURING PRODUCTS, such as Ores, Soils, Waters, Gases, Metals, Coals, Artificial Manures, Alkalies, &c., are made on moderate terms, and the commercial value estimated when required.

INVESTIGATIONS and EXPERIMENTS for IMPROVING MANUFACTURING PROCESSES carried on in conjunction with the proprietors.

A COURSE of ONE HUNDRED LECTURES on GENERAL CHEMISTRY delivered during the Winter Session at the College of Medicine in connection with the University of Durham, to which the laboratory students have free admission.

**BERDAN'S EXPERIMENTAL AND REDUCTION WORKS**  
D COMPANY, WORKS AT LETT'S WHARF, WATERLOO BRIDGE (Surrey Side, opposite Somerset House).—EXPERIMENTS with BERDAN'S MACHINE will be RE-COMMENCED during the ENSUING WEEK at the NEW WORKS (as above), where ores are received (carriage paid), and arrangements made for the time of experiment. The manager will attend at the office in the City, 17, Cornhill, from One till Two o'clock, to receive fees and arrange experiments.

By order, F. CATTY, Manager.

**ORE CRUSHING.—CAUTION.**—I hereby CAUTION all persons MANUFACTURING, USING, and SENDING, without special license from me, MACHINES for the purpose of CRUSHING, PULVERIZING, and AMALGAMATING mineral and other substances, in which BALLS or SPHERES ARE USED IN CONNECTION WITH, OR MOVED BY, A REVOLVING PLATE OR PLATES, the same having been secured to me through, and in the name of, my agent, C. J. Wallis, under various modifications, by Her Majesty's Letters Patent for England and the Colonies, dated June and December, 1852. Signed, J. W. COCHRAN, 135.

**PERKES'S PATENTED MACHINERY FOR THE REDUCTION OF ORES, &c.**—GOLD QUARTZ COMPANIES, MINING COMPANIES, and OTHERS, REQUIRING MACHINERY FOR WORKING AURIFEROUS AND OTHER ORES, are respectfully informed that the PATENTED MACHINERY, invented by the undersigned, will operate upon more quartz per day, and at a less cost of power, than any other machine hitherto made, and which he guarantees will by far supersede every description of revolving or stationary pans with one or more balls working within them, but which are also included in his patent; and that no one else can, or has, a valid patent for such apparatus in this country; and NOTICE is HEREBY GIVEN, that PROCEEDINGS WILL BE ADOPTED FORTHWITH AGAINST ANY PARTY USING, or PURCHASING, SUCH MACHINES WITHOUT HIS LICENSE AND AUTHORITY; but if any party chooses to adopt such revolving pans with balls for their operations, he will be happy to supply them at a cost of not exceeding £450 each. SAMUEL PERKES, Engineer and Patentee, 1, Walbrook, City, Nov. 3, 1853.

**GOLD MACHINERY.—ORDERS can NOW be RECEIVED** to any extent for PERKES'S PATENTED CONICAL ORE PULVERISING, WASHING, AND AMALGAMATING MACHINES; and also his PATENTED REVOLVING PANS AND BALLS, and whose machines have recently produced the most extraordinary results, beyond everything hitherto obtained from the same description of ores by any other machines yet invented.—Particulars can be had and certificates seen on application to S. Perkes, patentee, 1, Walbrook, London. 135.

**THE GOLD ORE MILL PERFECTED, BY W. L. TIZARD,**  
MECHANICAL AND CONSULTING ENGINEER, by which the following amongst other DEFECTS in similar machines are AVOIDED:—viz., Large outlay for superfluous mercury, excessive wear and tear, and compulsory renewal, in lieu of repairing, unportability, inefficiency, constant noise, little work, and self-destruction of clashing balls. Works in time, materials, and motive power, by either stampers, edge runners, cones, or spheres in contact with flat or inclined surfaces, fracture of pans and balls by fire, water, and concussion, inevitable loss of mercury, amalgam, &c., which are thrown off with the tailings at the periphery by centrifugal motion, total absence of security against peculation, and costliness.—For description and prices, address Mr. W. L. Tizard, at the manufactory, 34½, Aldgate High-street, London.

**GOLD AND SILVER ORE REDUCTION WORKS, RANELAGH**  
ROAD, THAMES BANK, PIMLICO (Temporary Offices, 98, New Bond-street, where all present applications are to be made)—G. BURSILL AND CO. invite the proprietors of mines to SEND to them for REDUCTION, by their PATENT PROCESS, SAMPLES of ORES that are assumed to be auriferous, and which should be in bulk, when convenient, of more than 2 cwt. (carriage paid), after which they will be prepared to enter into contracts for more extensive operations, either at their works as above, or by the erection of suitable machinery at the pit's mouth, and at their own cost, provided that a sufficient supply of gold-bearing mineral may be received on a charge will be made for reduction, but the ores will not be subjected indiscriminately, or without preparation, to one and the same process; as far as may be expedient, they will be tested, qualitatively and quantitatively, for gold and other products, in order that improved means may be applied for their reduction upon the large scale.

The patents secured by G. Bursill and Co. embrace efficient and continuous means for crushing and amalgamating, in addition to a method of disintegrating, by which pulverisation is vastly facilitated; they also include improvements in washing, separating, roasting, and smelting, and have reference to an extensive field of metallurgical operations in relation to gold, silver, copper, lead, antimony, and tin.

**BURSILL'S PATENT AMALGAMATION MILLS.**—Notice is hereby given, that the SEPARATOR, so called, or, properly speaking, the AMALGAMATOR, a drawing of which was shown at the Meeting of the Society of Arts, held November 23, 1853, and described by Mr. Charles Stanbury (for the first time in public, as was erroneously supposed and stated), as about to be used by Mr. Bursill, IN CONJUNCTION with his Patent Revolving Basin and Ball, is an INFRINGEMENT upon a PATENT granted to me by Her Most Gracious Majesty, Queen Victoria, for "Improvements in Operating upon Auriferous Quartz, Clay, and other Minerals, preparatory to, and in order to accomplish, the Separation of the Gold, and other metals; also, in Machinery or Apparatus for effecting such improvements;" bearing date the 12th day of February, 1853. And that all such MAKING, VENDING, or USING my PATENT SEPARATORS, or AMALGAMATORS, without due license and authority from me, are LIABLE to a SUIT in Her Majesty's High Court of Chancery; but that I am willing to enter into CONTRACTS for the USE of such MACHINES upon reasonable terms. Signed, G. H. BURSILL, Of offord-road, Barnsley-park, Islington; and of the Reduction Works, Ranelagh-road, Pimlico (Office, 98, New Bond-street).

**BAGGS'S PATENT STEAM STAMPS ARE IN FULL OPERATION, and are now ADOPTED by the following companies:—**  
THE ERB VALVE IRON COMPANY.  
THE ENGLISH AND AUSTRALIAN COPPER COMPANY.  
THE ANGLO-CALIFORNIA GOLD MINING COMPANY.  
THE ALLIANCE GOLD MINING COMPANY.  
THE MEXICAN AND SOUTH-AMERICAN COMPANY.  
THE ST. JOHN DEL REY (Gold, Brazil).  
THE LINARES LEAD MINING ASSOCIATION (Spain).  
THE LONDON AND CALIFORNIA GOLD QUARTZ CRUSHING COMPANY.  
THE ALMADEN MINING AND SMELTING COMPANY (Spain).  
THE SAN FERNANDO LEAD MINING COMPANY (Carolina, Spain).  
THE NEW LINARES LEAD MINING ASSOCIATION (Spain).  
THE MARQUITA AND NEW GRANADA COMPANY.

The stamps to be seen at Mr. Burley's 53, Borough-road; and a working model in action every day at Peele's Coffee House, Fleet-street, London, from One to Two, and from Six to Seven P.M. Price £160, royalty included.—All communications to be addressed, Mr. Isham Baggs, Mining Journal office, 26, Fleet-street; or to Mr. F. J. Bramwell, engineer, 29, New Bridge-street, Blackfriars, London.

**TO IRONMASTERS.—STEAM HAMMERS, WITH GREAT IMPROVEMENTS in POWER, STRENGTH, and ECONOMY.**—Mr. ISHAM BAGGS is now prepared to SUPPLY ironmasters, engineers, manufacturers, and miners, with STEAM HAMMERS and STAMPS of the most IMPROVED CONSTRUCTION, for forging and hammering iron and other metals, driving piles, and stamping and crushing gold quartz, metallic ores, and minerals of every description. By the introduction of a principle which he has recently patented, no less than FIFTY PER CENT. of the STEAM now used is SAVED, while the blow struck is much harder than in the engines now in use.

The NEW STEAM-STAMPS, for crushing ores, have been adopted by many of the leading companies, and they are now at work in various parts of North and South America, Australia, and England. They are eminently adapted for spalling, as well as crushing to fine powder, and they effect an enormous saving in superseding manual labour. A four-horse steam-stamp complete, with all the latest improvements, £160 (royalty included), for cash. Contracts to any extent undertaken.

For further particulars, apply to Mr. Isham Baggs, Mining Journal office, No. 26, Fleet-street; or to Mr. F. J. Bramwell, engineer, No. 29, New Bridge-street, Blackfriars, London.

**TO ALL INTERESTED IN STEAM POWER.—A WORKING MODEL of BAGGS'S PATENT STEAM STAMPS and IMPROVED FORGE HAMMERS may be seen at PEELE'S COFFEE HOUSE, FLEET STREET.** These engines crush with ease blocks of the hardest ore a cubic foot in size at the rate of 20 to 30 tons a day.—All particulars may be ascertained on application to Mr. Isham Baggs, Mining Journal office, No. 26, Fleet-street, or Mr. F. J. Bramwell, engineer, No. 29, New Bridge-street, Blackfriars, London.

**MATHEMATICAL CLASSES at the ROYAL POLYTECHNIC INSTITUTION, NOW IN OPERATION, under the direction of G. R. MALLEY, Esq., a Graduate in First-class Mathematical Honours of the University of Cambridge.**—At the close of each Course a VOLUNTARY EXAMINATION will take place for pupils who may desire to obtain Certificates of Proficiency. Fees, One Guinea per month.—For particulars, apply to the secretary.

**RAILWAY WAGONS.—WM. A. ADAMS, MIDLAND WORKS, BIRMINGHAM.**  
BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS,  
IN STOCK—FOR SALE OR HIRE.

**THOS. SPENCER, VULCAN IRONWORKS, WEST BROMWICH, STAFFORDSHIRE,** MANUFACTURER of RAILWAY WHEELS and AXLES, SCRAP TYRES and AXLES, ALL KINDS of HAMMERED IRON for MARINE and other ENGINES, SHAFTS, and HEAVY IRON WORK.—SOLE MAKER of CAMBER'S PATENT WROUGHT-IRON RAILWAY WHEELS.

**MESSRS. WOODWARD BROTHERS, MANUFACTURERS of THE CELEBRATED WELSH GRINDSTONES, WELSH OIL STONES, TURKEY and GERMAN HONES, NORWAY RAG STONES, SCYTHE STONES, &c., RHOS-Y-MEDRE QUARRIES, RUABON, DENBIGHSHIRE.**

145

**STIRLING'S PATENT IRON.**—The TOUGHENED CAST-IRON for GIRDERs, SHAFTINGS, ROLLS, PINIONS, RAILWAY WAGGON WHEELS, ENGINE CYLINDERS, and for all purposes where a strong dense iron is required, can be PROCURED of the following brands:—

DUNDEYAN, FORTH COMPANY, HORSEY COMPANY.

LLOYD, FOSTERS, and CO. RUSSELL'S HALL, &c.

146

**RAILS of (or surfaced with) PATENT HARDENED IRON, can be OBTAINED of the following makes:—**

CROOKATE, DUNDEYAN, HORNBLAINE, HAWKS, CHAWSHAY, and CO., &c.

EBB VALE, DUNDEYAN, MONKLAND, HAWKS, CHAWSHAY, and CO., &c.

By direct application to the several works.

Full information as to manufacture, quality, and terms for use of patent right, will be given by Mr. CHARLES MAY, 3, Great George-street, Westminster; and by Mr. W. P. MARSHALL, 54, Newhall-street, Birmingham.

Messrs. THORNTON and SONS, of BRADFORD STREET, BIRMINGHAM, RECEIVE ORDERS for Mr. MORRIES STIRLING'S PATENT IRON, RAILS, &c.

147

**PATENT IRON TUBES and FITTINGS, of ALL KINDS and SIZES, for GAS, STEAM, and WATER, LAP-WELDED FLUES FOR BOILERS, GALVANIZED TUBES, SHEET-IRON, &c.**—Messrs. JOHN RUSSELL and CO., CHURCH HILL, WEDNESBURY, TUBING MANUFACTURERS from the commencement of Lighting by Gas, and previously Contractors with the Government and East India Company for gun-barrels, which were also first supplied by them to gas companies, and used for the distribution of gas.

147

London ESTABLISHMENT, 69, UPPER THAMES STREET.

N.B. Every tube is proved by hydraulic pressure before leaving the works.

148

**MUNTZ'S PATENT METAL COMPANY,** Sole MANUFACTURERS of G. F. MUNTZ'S (JUN.) PATENT SOLID BRASS TUBES.

The ADVANTAGES obtained by the use of an IMPROVED KIND of METAL in BRASS TUBES are clearly explained by the following facts:—

Wrought-iron and copper, when exposed to heat, sustain very considerable loss, caused by oxidation, when used in tubes for boiler flues, in consequence of which copper is no longer employed for that purpose.

The mixture of zinc, as in ordinary brass, prevents oxidation to some extent; but if to much is used it becomes so hard that it is impossible to work it into a tube by the usual process of drawing (which can only be done when the metal is cold), and, therefore, brass tubes made by drawing, having too little zinc in them, waste considerably, though not to the same extent as copper.

The patent of the improved tubes, having invented a process of manufacturing, by which metal can be rolled into tubes when red hot, is able to use a larger quantity of zinc, which entirely prevents oxidation, so that the tubes may be heated red, cooled, and heated again several times, without apparent loss. Besides which, the extra zinc renders the metal much harder, and, therefore, better able to resist the cutting action of the cokes, which are continually passing through locomotive boiler flues. This will be evident to every one who has observed that the soldered joint of the brazed tubes always wears longer than any other part; the reason of which is that the solder used in brazing contains more zinc than the rest of the tube, and it was the discovery of this fact which first led to the introduction of brass in preference to copper.

It is also found on trial that the sulphur does not accumulate in the Patent Solid Brass Tubes as it does in others; sulphur having a greater chemical affinity for copper, attaches itself to it very rapidly, but the larger proportion of zinc in the patent tubes prevents such adhesion to a very considerable extent. The inside, therefore, remains cleaner, and the tube more effective for generating steam.

The ordinary brass tubes are too soft to maintain their position in the boiler unless they are hardened by drawing; and this hardening is likely to make them brittle, that they often burst when at work, causing great hindrance to trains, and often injury to the engine driver.

It would be nearly impossible to fix the ordinary brass tubes in the boilers without splitting them, if the ends were not first annealed; and this annealing or softening makes the ends of the tubes which are exposed to the most wear least fitted for it.

The Patent Solid Brass Tubes may be cut and expanded in any part with equal facility, which will clearly show that they are not likely to split when in use.

The results of the trials of these tubes which have been in use is most satisfactory, showing a loss of less than one-half that of ordinary tubes which have performed the same services.

G. F. MUNTZ'S PATENT METAL COMPANY have now machines complete for making the following sizes of tubes:—1½, 1¾, 1½, 2, 2½, 2¾, 3, 3½, 3¾, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 7½, 8, 8½, 9, 9½, 10, 10½, 11, 11½, 12, 12½, 13, 13½, 14, 14½, 15, 15½, 16, 16½, 17, 17½, 18, 18½, 19, 19½, 20, 20½, 21, 21½, 22, 22½, 23, 23½, 24, 24½, 25, 25½, 26, 26½, 27, 27½, 28, 28½, 29, 29½, 30, 30½, 31, 31½, 32, 32½, 33, 33½, 34, 34½, 35, 35½, 36, 36½, 37, 37½, 38, 38½, 39, 39½, 40, 40½, 41, 41½, 42, 42½, 43, 43½, 44, 44½, 45, 45½, 46, 46½, 47, 47½, 48, 48½, 49, 49½, 50, 50½, 51, 51½, 52, 52½, 53, 53½, 54, 54½, 55, 55½, 56, 56½, 57, 57½, 58, 58½, 59, 59½, 60, 60½, 61, 61½, 62, 62½, 63, 63½, 64, 64½, 65, 65½, 66, 66½, 67, 67½, 68, 68½, 69, 69½, 70, 70½, 71, 71½, 72, 72½, 73, 73½, 74, 74½, 75, 75½, 76, 76½, 77, 77½, 78, 78½, 79, 79½, 80, 80½, 81, 81½, 82, 82½, 83, 83½, 84, 84½, 85, 85½, 86, 86½, 87, 87½, 88, 88½, 89, 89½, 90, 90½, 91, 91½, 92, 92½, 93, 93½, 94, 94½, 95, 95½, 96, 96½, 97, 97½, 98, 98½, 99, 99½, 100, 100½, 101, 101½, 102, 102½, 103, 103½, 104, 104½, 105, 105½, 106, 106½, 107, 107½, 108, 108½, 109, 109½, 110, 110½, 111, 111½, 112, 112½, 113, 113½, 114, 114½, 115, 115½, 116, 116½, 117, 117½, 118, 118½, 119, 119½, 120, 120½, 121, 121½, 122, 122½, 123, 123½, 124, 124½, 125, 125½, 126, 126½, 127, 127½, 128, 128½, 129, 129½, 130, 130½, 131, 131½, 132, 132½, 133, 133½, 134, 134½, 135, 135½, 136, 136½, 137, 137½, 138, 138½, 139, 139½, 140, 140½, 141, 141½, 142, 142½, 143, 143½, 144, 144½, 145, 145½, 146, 146½, 147, 147½, 148, 148½, 149, 149½, 150, 150½, 151, 151½, 152, 152½, 153, 153½, 154, 154½, 155, 155½, 156, 156½, 157, 157½, 158, 158½, 159, 159½, 160, 160½, 161, 161½, 162, 162½, 163, 163½, 164, 164½, 165, 165½, 166, 166½, 167, 167½, 168, 168½, 169, 169½, 170, 170½, 171, 171½, 172, 172½, 173, 173½, 174, 174½, 175, 175½, 176, 176½, 177, 177½, 178, 178½, 179, 179½, 180, 180½, 181, 181½, 182, 182½, 183, 183½, 184, 184½, 185, 185½, 186, 186½, 187, 187½, 188, 188½, 189, 189½, 190, 190½, 191, 191½, 192, 192½, 193, 193½, 194, 194½, 195, 195½, 196, 196½, 197, 197½, 198, 198½, 199, 199½, 200, 200½, 201, 201½, 202, 202½, 203, 203½, 204, 204½, 205, 205½, 206, 206

## THE MINING SHARE LIST.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
5120 Alfred Consols (copper), Phillack	£2 16s	£25	23 1/2	23 1/2	£10 5 0	£20 16 0—Jan., 1854.
5000 Altdorf Consols Slate Quarry	2	2	1 1/2	1 1/2	0 1 6	0 1 6—Feb., 1854.
5000 Angleson Coal Company	4	4	4 1/2	4 1/2	0 10 0	0 2 0—Nov., 1852.
1824 Balleswidden (tin), St. Just	11 1/2	6 1/2	12 5 0	0 5 0	0 5 0—Jan., 1854.	
5000 Bar Holes, Worthen, Salop	17 1/2 6d	3	1 1/2	1 1/2	0 10 0	0 10 0—April, 1853.
5000 Bedford United (copper), Tavistock	23	9 1/2	9	5 11 6	0 6 0	0 6 0—Feb., 1854.
5000 Black Craig (lead), Kirkcudbrightshire	5	2 1/2	1 1/2	0 5 0	0 2 8—July, 1853.	
124 Bowesdine and Wheal Castle	—	20	5 0	5 0	0 5 0—May, 1853.	
230 Botallack (tin), St. Just	91 1/2	350	360	275 5 0	7 10 0—Feb., 1854.	
1000 Brynabell, Llandioedd, Montgomeryshire	7	5	4 1/2	0 5 0	0 5 0—June, 1851.	
5000 Callington (lead, copper), Callington	71 17s	2 1/2	1 8 0	0 4 0	0 4 0—Sept., 1847.	
1000 Cirencester (tin), Illogan	15	88	23	225 10 0	2 0 0—Nov., 1853.	
256 Comford (copper), Gwennap, Cornwall	75	23	18	—	—	
256 Condor (copper), Camborne	20	150	145	47 0 0	4 0 0—Feb., 1854.	
128 Cwmythwyl (lead), Cardiganshire	60	150	25 0 0	5 0 0	0 8—Sept., 1853.	
124 Devon Great Consols (copper), Tavistock	1	430	425	376 0 0	9 0 0—March, 1854.	
12000 Dludro (copper), Ireland	1	1	1 1/2	0 3 0	0 1 8—Nov., 1853.	
672 Ding-Dong (tin), Gulval	5	5 1/2	55 0	0 0 0	—1850.	
179 Dolcoath (copper, tin), Camborne	257 1/2	97 1/2	95	873 4 0	3 0 0—Feb., 1854.	
2800 Drake Walls (tin, copper), Calstock	17 1/2 6s	2 1/2	1 1/2	0 6 0	0 1 6—April, 1853.	
300 East Darren (lead), Cardiganshire	23	92 1/2	90	4 0 0	2 0 0—Jan., 1853.	
128 East Pool (tin, copper), Illogan	24 1/2	193	235 10 0	2 10 0—Feb., 1854.		
94 East Wheal Crofty (copper), Illogan	125	60	840 0 0	—	—	
128 East Wheal Rose (silver-lead), Newlyn	50	140	2245 0 0	10 0 0	—March, 1852.	
1024 East Wheal Margaret (tin, copper)	5 1/2	12	13	0 5 0	0 5 0—Feb., 1854.	
2000 Ely Mining Company, Derbyshire	3 1/2	15	330 0 0	1 10 0—Aug., 1850.		
494 Fowey Consols (copper), Tynardreath	40	30	6138 11 5	160 0 0	0 10 0—Dec., 1853.	
14 Foxdale, Isle of Man	1304	4000	330 0 0	0 4 0	0 8—Dec., 1853.	
320 Ditto (New Shares of 25s, each)	10	23	8 0 0	0 8 0	0 8—Dec., 1853.	
3715 General Mining Co. for Ireland (cop., lead)	2 1/2	2 1/2	1 0 8	0 3 0	0 3—June, 1853.	
2000 Goginan (lead), Cardiganshire, Wales	4 1/2	16	22 0 0	5 0 0	0 0—Sept., 1850.	
1024 Gonamore (copper), St. Cleer	12 1/2	15	15 1/2	0 7 6	0 7 6—Dec., 1852.	
25000 Great Onslow Consols, Carmelford	1 1/2	1 1/2	0 2 0	0 2 0	0 2 0—June, 1852.	
13750 Great Polgoon (tin), St. Austell	3 1/2	1 1/2	0 10 0	0 4 3—Oct., 1852.		
119 Great Work (tin), Germoe	100	155	166 10 0	5 0 0	0 0—Nov., 1853.	
1024 Herdofield (lead), near Liskeard	8 1/2	9	8 1/2	2 5 0	0 7 6—Dec., 1853.	
6000 Hington Down Consols (copper), Calstock	3 1/2	14 1/2	13 1/2	13 1/2	0 5 0—March, 1854.	
1000 Holmbush (lead, copper), Callington	25	3	25 0 0	3 5 0	0 5 0—Sept., 1853.	
2900 Holyford (copper), near Tipperary	11	7	3 5 0	3 5 0	0 5 0—Sept., 1853.	
76 Jamaica (lead), Mold, Flintshire	31 13s. 6d.	25	380 0 0	5 0 0	0 0—March, 1851.	
20000 Kenmare and West of Ireland	1	1 1/2	3 1/2	0 1 6	0 1 6—Sept., 1853.	
786 Kirkcudbrightshire (lead), Kirkcudbright	9 1/2	3	1 1/2	1 10 0	0 5 0—Sept., 1853.	
20000 Lackamore (copper), Tipperary, Ireland	1	1 1/2	2 1/2	0 1 0	0 1 0—July, 1853.	
20 Laxey Mining Company, Isle of Man	100	1300	0 2 0	0 2 0	0 2 0—Aug., 1851.	
5000 Lewis (tin, copper), St. Erth	37 8s.	1083 0 0	2 0 0	0 0 0	0 0—April, 1853.	
1500 Levant (copper, tin), St. Just	2 1/2	98	126 3 0	5 0 0	0 0—Nov., 1853.	
400 Llisburne (lead), Cardiganshire, Wales	18 1/2	212 1/2	212 1/2	212 1/2	0 1 0	
6000 Marke Valley (copper), Cardon	41 10s. 6d.	8	4 5	0 2 6	0 2 6—May, 1853.	
2000 Mendip Hills (lead), Somerset	3 1/2	8	0 10 0	0 10 0	0 10 0—May, 1853.	
5000 Merlin (lead), Flint	2 1/2	8	1 1 0	0 1 0	0 2 6—June, 1853.	
20000 Mining Co. of Ireland (copper, lead, coal)	150	16 18 1/2	9 2 0	0 10 0	0 10 0—Jan., 1854.	
15000 Nantlle Vale (slate), Llanfyllin	1	1 1/2	0 2 6	0 1 3	0 1 3—Nov., 1853.	
470 Newtonards Mining Company, Co. Down	50	70	31 0 0	0 0 0	0 0—Jan., 1854.	
200 North Pool (copper, tin), Pool	22 1/2	180	182 1/2	303 0 0	0 0—Feb., 1854.	
140 North Roskar (copper), Camborne	10	150	249 10 0	4 0 0	0 0—Sept., 1853.	
6000 North Wheal Basset (copper, tin), Illogan	10 1/2	8	7 8	0 18 0	0 5 0—Jan., 1854.	
6400 Par Consols (copper), St. Blazey	1 1/2	2	23 5 0	0 10 0	0 10 0—July, 1853.	
5000 Peak United (lead), North Derbyshire	7 1/2	15	1 1 0	1 1 0	0 1 0—June, 1853.	
180 Perran St. George (cop., tin), Perranzabuloe	21 1/2	32 1/2	1 15 0	0 10 0	0 10 0—June, 1851.	
200 Phoenix (copper, tin), Linkinhorne	30	—	520	50 0 0	0 0—Nov., 1853.	
1000 Polberro (tin, St. Agnes)	15	13	14	5 0 0	1 0 0—March, 1854.	
5000 Providence Mines (tin), Uny Lelant	20 1/2	19	20 11 6	0 10 0	0 10 0—Feb., 1854.	
1948 Rix Hill (tin), Tavistock	3 1/2	2	0 8 0	0 4 0	0 4 0—Jan., 1853.	
23200 Rorrington (lead), Snailbeach, Shrewsbury	1	1 1/2	3 1/2	0 2 2	0 2 2—2 1/2—July, 1852.	
236 South Cadron (copper), St. Cleer	2 1/2	300	302 0 0	12 0 0	0 2 0—Feb., 1854.	
5000 South Tamar (silver-lead), Beerferry	16 1/2 6d.	7 1/2	6 1/2	6 1/2	0 0—Feb., 1854.	
236 South Tolgas (copper), Redruth, Cornwall	16	185	130	69 0 0	0 0—Feb., 1854.	
124 South Wheal Frances (copper), Illogan	37 1/2	260	237 5 0	5 0 0	0 6 0—March, 1854.	
1024 Spears Consols (tin), St. Just, Cornwall	1 1/2	3 1/2	8 8 6	0 2 6	0 2 6—Dec., 1853.	
1024 St. Abyun and Grysyl (copper, tin), Breage	3	4	0 17 6	0 7 6	0 7 6—April, 1852.	
94 St. Ives Consols (tin), St. Ives	80	125	882 0 0	0 0 0	0 0—Feb., 1854.	
1000 Stray Park and Camborne Vean (copper)	10 1/2	10	12 10 0	0 1 0	0 1 0—March, 1854.	
9600 Tamar Consols (silver-lead), Beeralston	4 1/2	1 1/2	12 1/2	4 11 0	0 2 0—Feb., 1853.	
6000 Throft (copper, tin), near Pool, Illogan	7	4	3 1/2	6 18 6	0 10 6—Feb., 1853.	
1024 Trebene (silver-lead), Menheniot	1 1/2	9 1/2	9 10	0 10 0	0 10 0—March, 1854.	
5000 Trelyon Consols (copper), Redruth	6	1 1/2	1 1 1/2	1 3 0	0 5 0—Oct., 1847.	
572 Trelyon Consols (tin), St. Ives	11 1/2	30	1 15 0	1 0 0	1 0 0—Feb., 1854.	
96 Trewoon (copper), Gwennap, Cornwall	32 1/2	330	4680 15 0	—	—1848.	
120 Trethellan (copper), Gwennap, Cornwall	7 1/2	120	102 10 0	—	—April, 1851.	
120 Trevijs (copper), Camborne	130	48	299 10 0	2 0 0	0 0—Jan., 1854.	
4226 Trewetha (silver-lead), Menheniot, Cornwall	2 1/2	51 1/2	0 10 0	0 10 0	0 10 0—March, 1854.	
100 Trumpet Consols (tin), near Helston	95	150	50 0 0	0 0 0	0 0—March, 1854.	
400 United Mines (copper), Gwennap	40	200	180	47 5 0	0 2 0—Feb., 1854.	
1024 Wellington (copper), Perranzabuloe	8 1/2	3	2 2 6	0 5 0	0 5 0—March, 1851.	
236 West Cadron (copper), Liskeard	20	270	241 5 0	0 5 0	0 5 0—Dec., 1854.	
1024 West Providence (tin, St. Erth)	5	35	32 34	2 0 0	2 0 0—Jan., 1854.	
1024 West Wheal Darlington	12 1/2 18s.	4 1/2	2 1/2	0 5 0	0 5 0—Dec., 1853.	
1024 West Wheal Treasury (copper)	10 1/2 10d.	4 1/2	1 1 1/2	0 10 0	0 10 0—Feb., 1854.	
122 Wheal Arthur (copper), Calstock	9	32	29 31	1 5 0	0 15 0—Feb., 1854.	
236 Wheal Bass (copper), Illogan	10 1/2	700	720	493 0 0	0 2 0—Jan., 1854.	
236 Wheal Brewer (copper), Gwennap	4	15	5 0 0	—	—	
236 Wheal Buller (copper), Redruth	5	112 1/2	1115 0	40 0 0	0 0—March, 1854.	
236 Wheal Clifford (copper), Gwennap	12 1/2	120	100 0	0 17 6	0 2 6—Feb., 1854.	
1024 Wheal Exmouth and Adams United	41 18s.	9 1/2	9 9 6	23 17 6	0 2 0—Feb., 1854.	
100 Wheal Friendly (tin), St. Agnes	70	9	2 0 0	0 0 0	0 0—Oct., 1853.	
128 Wheal Friendship (copper), Devon	5000	Wheal Goldes (sl. lead), Perranzabuloe	4	1 5 0	0 7 6—Sept., 1852.	
1024 Wheal James (iron, copper), Roche	1	1 1/2	0 2 0	0 2 0	0 2 0—May, 1853.	
512 Wheal Jane (silver-lead), Kea	1	20	4 10 0	0 1 0	0 1 0—Oct., 1853.	
436 Wheal Lovel (tin), Wendron	33	55	26 0 0	2 0 0	2 0 0—Feb., 1854.	
112 Wheal Margaret (tin), Uny Lelant	79	165	215 0 0	15 0 0	0 0—March, 1854.	
512 Wheal Mary Ann (lead), Menheniot	5 1/2	40	28 15 0	2 0 0	0 0—March, 1854.	
80 Wheal Owles (tin, St. Just, Cornwall)	70	520	135			